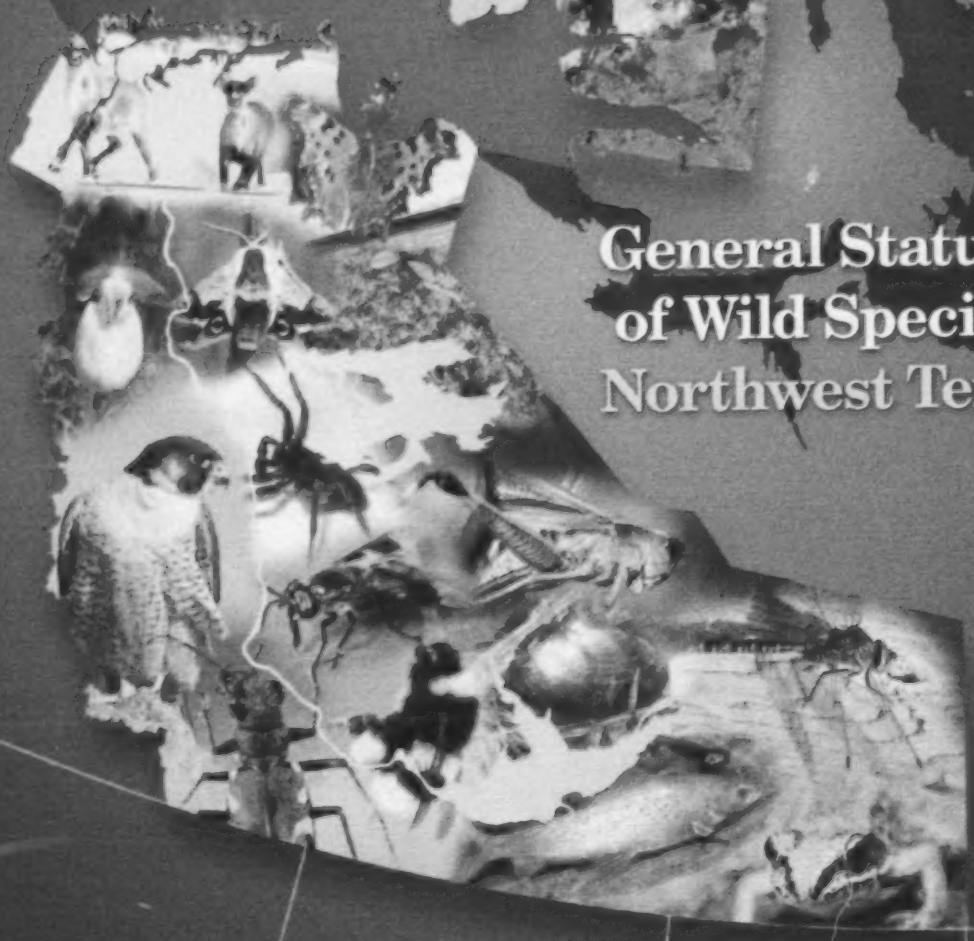
NWT Species 2011-2015



General Status Ranks of Wild Species in the Northwest Territories

NWT Species 2011-2015 | General Status Ranks of Wild Species in the Northwest Territories

In collaboration with:

Environment and Natural Resources

Canada

FJMC

Wek'èezhìi Renewable Resources Board

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NWT SPECIES 2011-2015

General Status Ranks of Wild Species in the Northwest Territories

Working Group on General Status of NWT Species

Northwest Territories Environment and Natural Resources

In collaboration with:

Canada

Wek'èezhìi Renewable Resources Board

■ **Polar Bear**

Photo Credit:
P Nicklen/National Geographic Stock

Table of Contents

Executive Summary ii

Preface – Building on our knowledge of NWT species 1

1. Background – Why rank the general status of all wild species? 2

2. Goals – What are we trying to achieve? 3

3. Scope – What did we look at? 4

4. Data Sources and Methods – How did we rank species? 6

5. Results – What did we learn? 12

6. Ranked Species Lists – What are the details? 17

6.1 Terrestrial Mammals 18

6.2 Marine Mammals 24

6.3 Birds 26

6.4 Fishes 38

6.5 Freshwater Mussels 44

6.6 Amphibians and Reptiles 46

6.7 Selected Beetles 48

6.8 Bumblebees 62

6.9 Butterflies 64

6.10 Selected Macromoths 70

6.11 Dragonflies and Damselflies 74

6.12 Selected Biting Insects 78

6.13 Grasshoppers and Katydid 84

6.14 Spiders 88

6.15 Vascular Plants 98

6.16 Mosses 136

6.17 Macro-lichens 152

7. Challenges and Opportunities – What are the next steps? 164

8. Further Your Knowledge – How to learn more? 166

9. Acknowledgments – Who participated in this program? 170

10. Monitoring Infosheet 171

■ Peregrine Falcon
Photo Credit: G Court

Executive Summary

The NWT is home to a diverse group of plants and animals. At least 30,000 species are estimated to occur here. An important first step in providing effective protection to biodiversity is to prevent species from ever becoming at risk. Monitoring the status of species is important to detect changes before they become critical and to determine which species need a more detailed assessment or closer monitoring.

This report on the general status of wild species in the NWT was produced collaboratively with other agencies and wildlife co-management boards, and with the input from knowledgeable people from the NWT and elsewhere.

The *NWT Species 2011-2015* is the third report of the NWT General Status Ranking Program. The reports are issued every five years. The present report provides ranks for more than 3400 species of mammals, fishes, birds, amphibians, reptiles, vascular plants, macro-lichens, mosses, spiders and some insect groups like butterflies, large moths, bumblebees, dragonflies, damselflies, ground beetles, lady beetles, predaceous diving beetles, grasshoppers, and biting insects.

Key findings of the program are provided. Overall, there are few changes in ranks of species covered in previous reports. Only 5% of changes can be attributed to an increase in threats to species. These threats are linked to declines in migratory bird populations and to a new disease, the white-nose syndrome, which can affect our bats in the next few years.

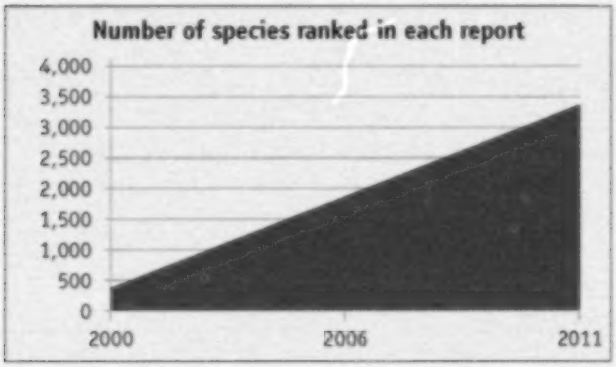
More species of insects are found in the NWT than recorded 20 years ago, mostly due to a changing climate. New alien plant species, some of which could have negative impacts on native species, have been recorded in the NWT in the past five years. There is not enough information to rank the general status of some insects, spiders and mosses.

Enthusiasm for biodiversity is great in the North. More people are sharing information on species than ever. This is facilitated by the increased availability of the internet and high-quality digital cameras. The next report in 2016 will include additional species groups and will review the ranks of all species included in the present report.

Preface – Building on our knowledge of NWT species

The *NWT Species 2011-2015* report is the third in a series of reports to be published every five years. The previous reports on the general status ranks of species in the Northwest Territories were published in 2000 and 2006. The *NWT Species 2011-2015* report presents the general status ranks of 3,429 species known or expected to be present in the Northwest Territories (NWT).

Since 2000, we have collected information on additional species. Monitoring of the general status of species was performed every year. We updated, corrected, and added new information to our catalogue of referenced information, the "*NWT Species Monitoring Infobase*", searchable on the Internet at **www.enr.gov.nt.ca**. As of 2011, we have updated the general status ranks for the 1,700 species ranked in 2006 and added new ranks for more than 1,700 additional species. In 2000, only about 400 species were ranked.



We would like to thank all knowledgeable persons from the NWT, or visiting and studying in the North, who have contributed a vast amount of information on NWT species.

General Status Ranks provided in the *NWT Species 2011-2015* report are valid from 2011 to 2015 inclusively.

The report is designed to:

- Provide priority lists of species that need more detailed assessment and may need special protection efforts in the future;
- Raise awareness of the current status of individual species that were found to be sensitive to human activities, and those for which more information is needed;
- Stimulate public input into a common knowledge base to help in the next general status evaluation; and
- Provide a reference tool to be used by wildlife management agencies, co-management boards, impact assessment agencies, industry, governments, and all northerners when making decisions related to wildlife.

The NWT Species General Status Ranking Program continues to be a valuable tool to exchange ideas, reach common understandings, and build on our collective knowledge to manage human activities in an ecologically sustainable manner.

As of 2010, the program now has an official role as its results are providing information to the new Species at Risk Committee, formed under the *Species At Risk (NWT) Act*, for their deliberations on which species should be assessed in detail to determine if they are endangered, threatened, or of special concern in the NWT.

The ranking system used by the program is shared by all jurisdictions in Canada, and is similar to systems used by other countries. This tool helps us set conservation priorities territorially, nationally, and internationally – especially across the circumpolar regions of the world.

Working Group on General Status of NWT Species

For more information, please contact:
Director
Wildlife Division
Environment and Natural Resources
Government of the Northwest Territories
Box 1320
Yellowknife, NT
Canada X1A 2L9

Phone: (867) 920-8064
Fax: (867) 873-0293

Refer to the Monitoring Infosheet at the end of this report for more contact numbers.

1. Background – Why rank the general status of all wild species?

The Northwest Territories is home to at least 30,000 species. Some of these have a very important place in our economy and our cultures. Some species are facing threats due to human activities and other species are simply very rare. During the past few decades, we have recognized the need to broaden our monitoring efforts. The loss of a single species may have negative consequences that ripple through an ecosystem, resulting in threats to the survival of both game and non-game species. Increasing our knowledge of all species is essential to modern wildlife management and ecologically sustainable development. We now can provide baseline information on a greater number of animals and plants, and can report on how each species is doing in general. Species that are found to need special attention are noted and prioritized for further assessment.

Our Commitments under the Accord for the Protection of Species at Risk in Canada

The Government of the Northwest Territories signed the *Accord for the Protection of Species at Risk in Canada*. An important first step in providing effective protection to species is to prevent them from ever becoming at risk. This is done by monitoring, assessing and reporting regularly on the status of all wild species. Environment and Natural Resources, working closely with the federal government, co-management boards, universities, research firms and knowledgeable people, has initiated the NWT Species General Status Ranking Program to fulfill its commitment to monitor the general status of wild species in the Northwest Territories. This document is the 3rd report of a continuing program.

Our Participation in the Assessment of Species at Risk in Canada

The evaluation system described in this report uses a standard process that is shared by all Canadian jurisdictions. This system is similar to systems used in other countries and by NatureServe, the largest co-ordinated effort to rank the biological status of species in the western hemisphere. **Link to www.natureserve.ca.**

As the Northwest Territories, and Nunavut, do not have yet a fully functioning NatureServe program, the results of the General Status Ranking Program can be used as a surrogate.

The results of the NWT Species General Status Ranking Program are combined with the results of similar programs in each jurisdiction to develop an overall "Canada-wide rank" for each species. Canada-wide ranks for species in Canada can be found on the Wild Species – General Status of Species in Canada web site. **Link to www.wildspecies.ca.** Canada-wide ranks are used to prioritize species in Canada for more detailed assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Our New *Species At Risk (NWT) Act*

In 2010, the Government of the Northwest Territories passed its first legislation designed to protect species at risk in the NWT, as part of a larger commitment to maintain the biodiversity of the NWT. The Species at Risk Committee (SARC), established under the *Species At Risk (NWT) Act*, assesses the biological status of species that may be at risk in the NWT. SARC uses the results of the NWT General Status Ranking Program as a starting point to investigate which species may have higher priority for a more detailed assessment. The detailed assessment is based on traditional, community and scientific knowledge of the biological status of the species.

Our Participation in Monitoring Biodiversity Across the Arctic

This report helps *The Arctic Council* and its programs such as the Conservation of Arctic Flora and Fauna (CAFF) monitor circumpolar biodiversity and to share information about Arctic species with other jurisdictions. **Link to www.arctic-council.org and www.caff.is.**

2. Goals – What are we trying to achieve?

Prioritize

- To prioritize species for more detailed status assessment within NWT. Species that are ranked as "May Be At Risk" are of highest priority for detailed assessment in the NWT.
- To suggest candidate species for detailed assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or by the Committee of Species at Risk (SARC) in the NWT.

Describe

- To succinctly describe the current state of our knowledge about all wild species in the NWT.

Primary Goal

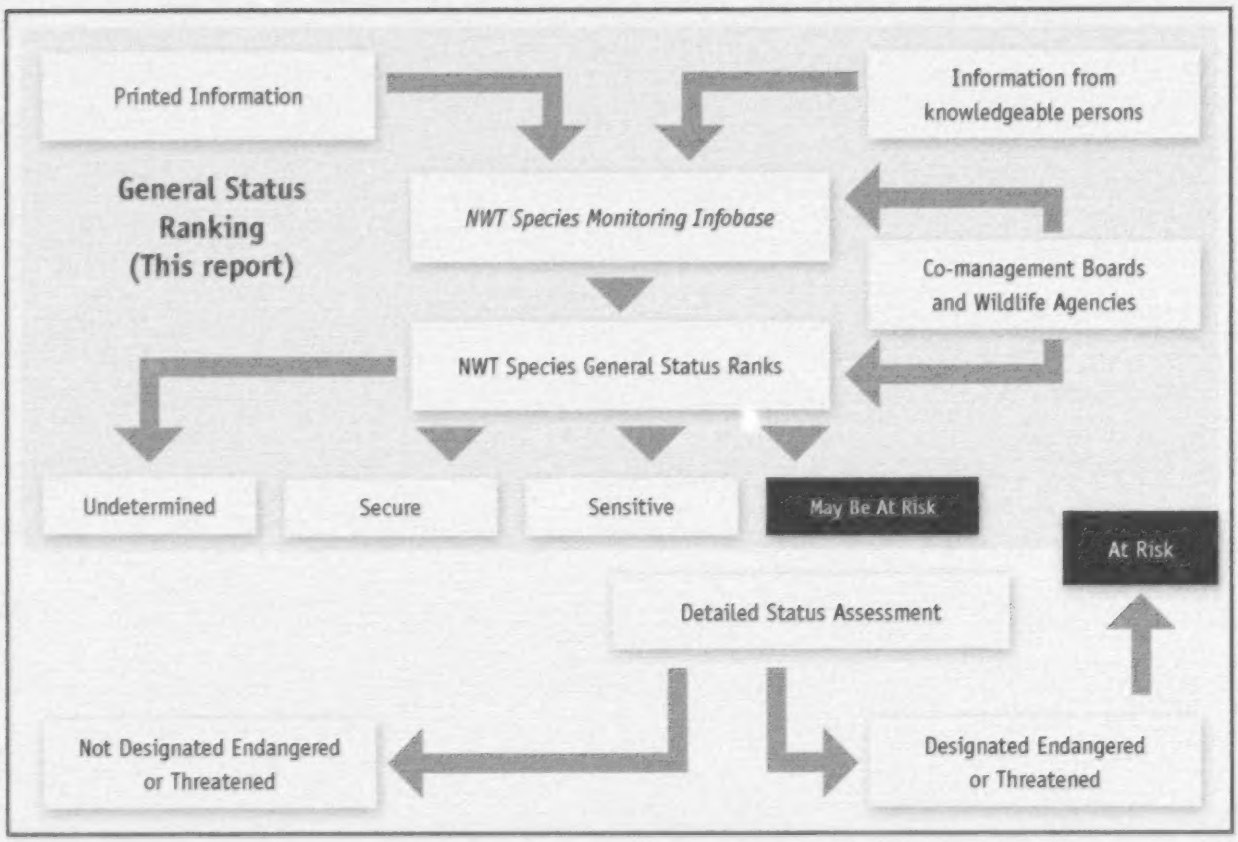
To maintain biodiversity by ensuring that no species becomes extinct as a consequence of human activity.

Educate

- To educate and increase awareness of species needing special attention and of possibilities for active involvement in monitoring activities throughout the NWT.

Guide

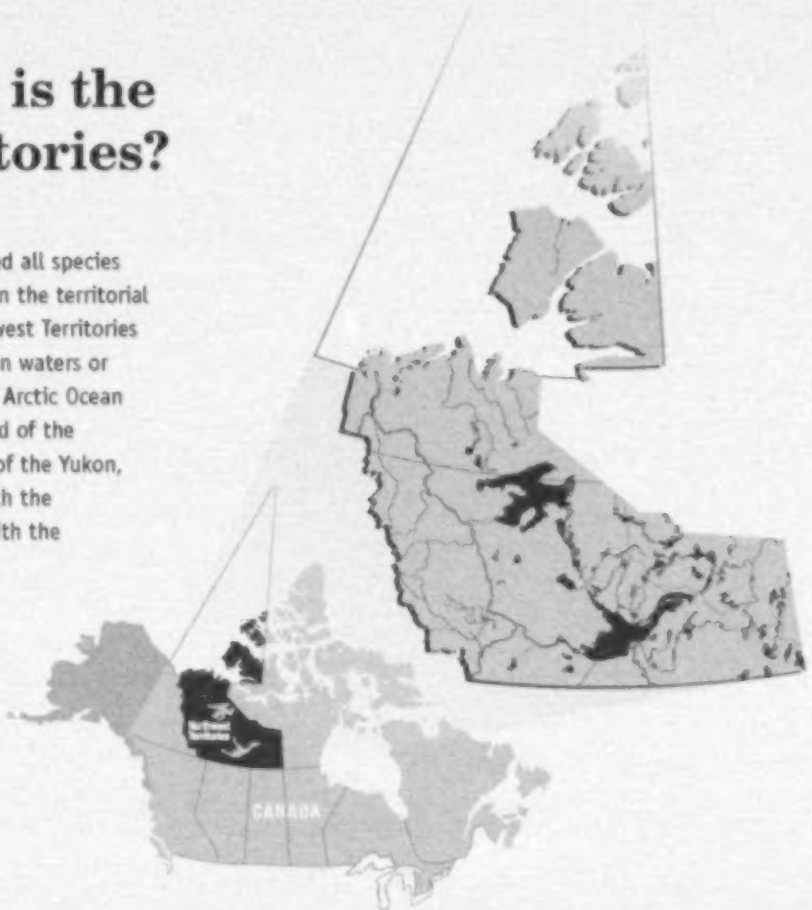
- To provide a clear evaluation system and species status ranks to guide conservation and impact assessment decisions, and to provide a tool for exchanging information about the status of wild species.



Geographic Scope

Where and what is the Northwest Territories?

For the purposes of this project, we considered all species found on the lands and waters included within the territorial boundary within Canada as part of the Northwest Territories (NWT). NWT land and waters include the ocean waters or sea floors that are part of the Beaufort Sea – Arctic Ocean complex, limited in the south by the mainland of the Northwest Territories and the off-shore limit of the Yukon, in the west by the international boundary with the United States, in the east by the boundary with the Territory of Nunavut and in the North by the 90th Parallel.



NWT Geographical Information

Land mass

Area = 1,350,000 km²

13% of Canada

Freshwater ecosystems

Area of rivers, lakes and wetlands = 163,000 km²

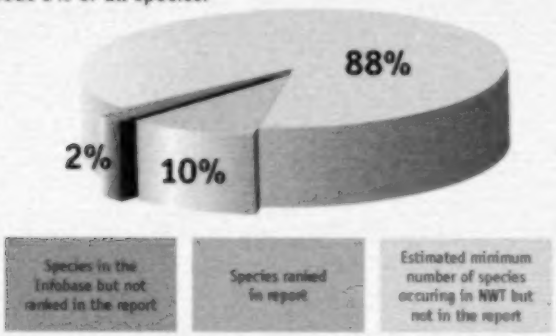
Source: Natural Resources Canada

Mackenzie River and Camsell Range Mountains

Photo Credit: D Downing/GNWT

Species Scope
Which species are ranked in this report?

The *NWT Species 2011-2015* report covers 10% of all species estimated to be in the NWT (30,000). This is a large increase over 2000, when the report covered about 1%, and in 2006, about 5% of all species.


88%
2%
10%
Species in the Infobase but not ranked in the report
Species ranked in report
Estimated minimum number of species occuring in NWT but not in the report

In this report, we have included more groups of insects. In addition to dragonflies, damselflies, butterflies, and tiger beetles included in 2006, we have ranked the general status of some groups of beetles, biting insects, grasshoppers, and a subset of moth and bee species. Insects form the largest part of our biodiversity, but are still the least studied. For the first time, we have ranked all the mosses, macro-lichens, and spiders found in the NWT. All species ranked in 2006 have been reviewed for 2011 in the following pages.

The groups of species included in this report were determined in collaboration with all jurisdictions in Canada to help us share information and rank the general status of these species for Canada. To find Canada-wide ranks and more information. **Link to www.wildspecies.ca.**

Proportion of species ranked compared to all species expected to be in the NWT

Kingdom or major subdivision	Total expected	Species list available	Status ranked for 2011	Percent ranked
Superkingdom Prokaryota				
Monera (e.g., bacteria, blue-green algae)	hundreds	0	0	0%
Superkingdom Eukaryota				
Algae (e.g., green algae, brown algae, red algae)	thousands	0	0	0%
Fungi (e.g., mushrooms, lichen, molds)	thousands	346	346	35%
Protozoa - Single celled organisms	thousands	0	0	0%
Animalia - "Simple" invertebrates (jellyfishes, corals, sponges, worms)	thousands	0	0	0%
Animalia - Mollusca - Mollusks	thousands	164	2	0.1%
Animalia - Arthropods (e.g., crustaceans, spiders, insects)	9,000 - 22,000[a]	1,244	964	9%
Animalia - Echinoderms (e.g., starfishes, urchins)	hundreds	0	0	0%
Animalia - Chordates - Nonvertebrates	hundreds	0	0	0%
Animalia - Chordates - Vertebrates - Birds	284	284	284	100%
Animalia - Chordates - Vertebrates - Mammals	78	78	78	100%
Animalia - Chordates - Vertebrates - Reptiles and Amphibians	8	8	8	100%
Animalia - Chordates - Vertebrates - Fishes	113[b]	113	71	49%
Plantae - Bryophytes (liverworts, mosses)	510	498	498	98%
Plantae - Vascular plants (e.g., flowering plants, trees, ferns)	1178	1,178	1,178	100%
TOTAL	30,000	3,913	3,429	10%[c]

Total number of species expected were estimated as number of known species in the world x 2.5%, expected proportion to occur in NWT.

a Expected number of arthropods in NWT was estimated using two methods. (1) NWT species numbers = C x p , where C is the number of known Canadian arthropod species. (37,000) and p is the expected proportion of C found in NWT, based on the proportion of Canadian insect and spider species known to be in NWT = 25%. This proportion, based on more information, was revised from 30% published in *NWT Species 2000*. (2) NWT species numbers = W x q, where W is the number of known arthropod species in the world (874 000) and q is the expected proportion of W found in NWT, based on the average proportion of known species in the world found in NWT (2.5 %).

b Includes marine species, of which 2 are assessed.

c Percent of all taxa for which we have any estimate of how many are expected in the NWT (about 30,000).

Species Lists and Information
Updating the Infobase

The NWT Species Monitoring Infobase stores all the information necessary to rank species. This information system is available on **www.nwtspeciesatrisk.ca**. Each year, the information in the Infobase is updated and new references are linked to each piece of new information. Sources of information could be a printed publication, a database, a web page or a knowledgeable person.

The type of information added to the NWT Species Monitoring Infobase included adding new species, updating all species names according to current taxonomic authorities, adding new baseline information used to assess status rank of species, updating the list of threats, and for some species updating the status according to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC; **Link to www.cosewic.gc.ca**) and the global conservation status according to NatureServe (**Link to www.natureserve-canada.ca**) and the IUCN Red List (**Link to www.iucnredlist.org**).

In the coming year, the Infobase will be modified to be able to keep track of changes in the legal status of species under the *Species At Risk (NWT) Act*.

Many knowledgeable people added information from their own observations, and from their expert opinion. Keeping track of new scientific knowledge, in addition to adding newly available local knowledge and traditional knowledge, is contributing greatly to the information needed to rank species.

An example of a printout from the NWT Species Monitoring Infobase is provided on the following page. ❯

To obtain a CD copy of the
NWT Species Monitoring Infobase,
please contact:
Director
Wildlife Division
Department of Environment and Natural Resources
Government of the Northwest Territories
Box 1320
Yellowknife, NT X1A 2L9

Peregrine Falcon *Falco peregrinus*

INDICATORS	SCORES
Population: 1A More than 1000 known breeders in NWT (R182); Breeding population is highly buffered by floater-to-breeder ratios commonly in range of 1:1 to 2:1 (R182)	B
Occurrences: 1B About 100 nest sites along the Mackenzie River – probably more than 4-300 in NWT (R182)	D
Distribution in NWT: 1C 38% (*anatum*) + 31% (*tundrius*) = about 70% (R182)	C
NWT Ecozones Habitat: Taiga Cordillera, Taiga Plains, Taiga Shield, Southern Arctic, Northern Arctic cliffs for nesting (B126)	
Population trends: 2A Increasing from previous population crash, increasing since 1980, stable since 1990 (A121; R182). *Anatum* and *tundrius* sub-species considered indistinguishable. (A153).	C
Distribution trends: 2B Stable (R182)	C
Threats to population: 3A Organochloride contamination; human interference (falconry, habitat loss, etc)	B
Threats to habitat: 3B Limited effects of development and disturbance (H126) but predicted to increase with development	C

NWT GENERAL STATUS RANK Sensitive

COSEWIC Special Concern – 2007
SARA Threatened – 2000 (for anatum)

Decision Process: Drafted by S Carriere based on printed references – Reviewed in 2010 no change except grouping of *anatum* and *tundrius* into one rank.

Global IUCN Status and CDC Rank: G4 (W050)

Status Rank Comment: Probably recovered with more than 1000 individuals; threats are limited – although increased development along Mackenzie River and new contaminants (flame retardants) can be of concern

NWT G Status Date: 26/10/2010

References:

A121 Rowell, P., Holroyd, G.L. and Banash, U. 2003 . The 2000 Canadian Peregrine Falcon Survey. J.Raptor.Res. . 37(2):98-116

B126 White, C. M., N. J. Clum, T. J. Cade, and W. G. Hunt. 2002 . Peregrine Falcon (*Falco peregrinus*). The Birds of North America Online. (A. Poole, Ed.). Ithaca: Cornell Laboratory of Ornithology. Ithaca http://bna.birds.cornell.edu/BNA/account/Peregrine_Falcon/.

A153 Brown, J. W., P. J. V. de Groot, T. P. Birt, G. Seutin, P. T. Boag, and V. L. Friesen. 2007. Appraisal of the consequences of the DDT-induced bottleneck on the level and geographic distribution of neutral genetic variation in Canadian peregrine falcons, *Falco peregrinus*. Molecular Ecology 16:327-343

R182 COSEWIC . 2007. Update COSEWIC Status Report on Peregrine Falcon *Falco peregrinus*. Ottawa

W050 NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: August 27, 2010).

Evaluation Process

From Infobase to General Status Ranks

Guidelines were developed to convert data and information into seven indicators. These indicators were scored to produce a status rank for each species. The seven biological indicators used to evaluate the biological status of a species are given below.

SIZE

1A Population Size – the current estimate of the total number of mature individuals.

1B Number of Occurrences – the estimated number of occurrences where the species currently persists. An occurrence is a location or place where a species is found, in which a single event may affect all individuals of the population.

1C Distribution – the current range. In this report, distribution was calculated as the percentage of total NWT land or marine area covered by the range of the species.

TREND

2A Trend in Population – an estimate of the observed change in number of mature individuals over time.

2B Trend in Distribution – an estimate of the observed change in area of range over time.

THREAT

3A Threats to Population – observed, inferred, or projected factors affecting individuals or populations that may result in population declines over the next 5 years.

3B Threats to Habitat – observed, inferred, or projected habitat alterations that may result in population declines over the next 5 years.

Each indicator was given a score according to the following matrix. The scores were then converted into a general status by following guidelines shown in the scoring matrix. As a guide, the species is assigned the highest general status (from May Be At Risk, Sensitive to Secure) reached using any indicator.

Guideline Matrix

For Scoring Indicators and Assigning General Status Ranks

	INDICATOR	SCORE			
		A	B	C	D
SIZE	1A Population Size	Very small (< 1,000)	Small (1,000-3,000)	Medium (3,000-10,000)	Large (>10,000)
	1B Number of Occurrences	Very small (0-5)	Small (6-20)	Medium (21-100)	Large (>100)
	1C Distribution	Very Restricted (<3% of jurisdiction)	Restricted (4-10% of jurisdiction)	Regional (10-50% of jurisdiction	Widespread (>50% of jurisdiction)
TREND	2A Trend in Population	Rapid Decline (>50% in 10 years)	Decline (>20% in 10 years)	Stable (incl. natural fluctuations)	Increasing (any rate)
	2B Trend in Distribution	Rapid Decline	Decline	Stable	Increasing
THREAT	3A Threats to Population	Extreme	Moderate	Limited	None
	3B Threats to Habitat	Extreme	Moderate	Limited	None

RULE: Assign the highest general status reached using any indicator

May Be At Risk

Sensitive

Secure

Status Rank Categories
Priorities for Study and Management

Each species was placed into one of ten standard rank categories:

1) **At Risk** – species for which a detailed assessment has already been completed (e.g., by COSEWIC or jurisdictional status reports) that determined the species to be at risk of extirpation or extinction. This is a special category used only for species that have been assessed as "Endangered" or "Threatened" according to COSEWIC, or according to SARC in the NWT.

Categories determined using the scoring matrix

2) **May Be At Risk** – species that may be at risk of extinction or extirpation, and are therefore candidates for detailed risk assessment. This is the highest rank that can be given to a species using the General Status Ranking system independent of a more detailed assessment as noted in the At Risk category. **These species are ranked with the highest priority for a more detailed assessment by COSEWIC in Canada or SARC in the NWT.**

3) **Sensitive** – species that are not at risk of extinction or extirpation but may require special attention or protection to prevent them from becoming at risk. These species are ranked with a medium priority for a detailed assessment.

4) **Secure** – species that are not at risk or sensitive. These species have the lowest priority for a detailed assessment.

Categories determined using its definition only

5) **Undetermined** – species for which insufficient information, knowledge, or data is available to reliably evaluate their general status.

6) **Not Assessed** – species which have not been examined for this report. Due to time constraints, some species have not been assessed for the present report. This information provides a list of species that should be examined soon.

7) **Alien** – species that have been introduced as a result of human activities. Most alien species have been introduced to North America from Europe and Asia. Changes in the number of alien species can be monitored as their presence and abundance may affect the status of wild species native to the NWT. Synonymous with exotic or introduced.

8) **Extirpated/Extinct** – species no longer thought to be present in the NWT (extirpated) or are believed no longer present anywhere in the world (extinct).

9) **Vagrant** – species occurring infrequently and unpredictably in the NWT. These species are outside their usual range. Synonymous with accidental. These species may be in the NWT due to unusual weather occurrences, an accident during migration, or unusual behaviour by a small number of individuals. If a species appears in the NWT with increasing predictability and more frequently, it may eventually be given a different rank. Changes in the number of vagrant species may be a good indicator of general ecosystem or climatic change.

10) **Presence Expected** – species not yet recorded in the NWT, but are expected to be present. These species are expected in the NWT due to their presence in adjacent jurisdiction(s), the presence of appropriate habitat in the NWT, and other evidence. The status rank is used to list species for which we need firm evidence of their presence in the NWT. They form a **"Look For"** species list. When a new species is found in the NWT, the list of "Presence Expected" species is useful to differentiate between species that may have been in the NWT all along but simply had not been confirmed, and species that are truly new to NWT and may indicate that ecosystems are changing. This is a new rank category developed in 2005 for the NWT; no other jurisdictions in Canada have adopted it yet.

The evaluation process was similar for each group of species. The scoring process was performed with the help of several experts and knowledgeable persons listed in the acknowledgement section at the end of the report. More information on guidelines and processes can be found in Carrière and Lange (2002).

Changing Ranks
Keeping Track of Changes in the General Status of NWT Species

With this third report, we can continue to track how the general status of NWT species changes. We can detail how the rank changed between 2006 and 2011. Changes in the rank of a species between 2000 and 2006 were noted in the *NWT Species 2006-2010* report.

Changes in the rank of a species may occur for various reasons. We coded these reasons to be able to quickly draw up lists of species that truly have increasing or decreasing risks of becoming in danger of extirpation. These species can be set apart from species that have a different rank simply because additional information was found, an error was corrected, or for other reasons.

Codes Marking Reasons for Changing the General Status Rank of Species

↗ **Increasing Risk:** modification of status rank indicating an increasing risk of becoming extirpated (e.g., from secure to sensitive) as a result of real changes in threats, trends, population size or a combination of these factors. *This code can be used to estimate rate of changes in the status ranks of species in the NWT.*

↘ **Decreasing Risk:** modification of status rank indicating a decreasing risk of becoming extirpated (e.g., from sensitive to secure) as a result of real changes in threats, trends, population size or a combination of these factors. *This code can be used to estimate rate of change in the status ranks of species in the NWT.*

∃ **Error Correction:** the rank published in a previous report was in error or was missing.

**New:** species new to the NWT or newly found since the last report, but was probably already present.

ⓘ **Information:** change in rank as more information became available. This is similar to an error correction, but the rank was changed simply because more research, monitoring, or inventories were conducted, or more information became available from local or traditional sources. There is no evidence that threats to the species have changed. *This code, in addition to all codes described above, can be used to estimate the rate in knowledge gain on species in the NWT.*

T **Taxonomy:** change in rank due to taxonomic modifications such the reclassification of two species as a single species, or the splitting of a single species into two taxonomic entities.

A **Detailed Assessment:** change in rank to "At Risk" because the species' biological status was assessed in detail during the last five years by COSEWIC or by SARC in the NWT and it was determined that the species is at risk of extirpation or extinction in the NWT (e.g., "Endangered" or "Threatened" according to COSEWIC or SARC).

These coded reasons for change are similar to those used by all other Canadian jurisdictions using the General Status Ranking Program, and hence can be used to compare results amongst jurisdictions in Canada at **www.wildspecies.ca**.

5. Results – What did we learn?

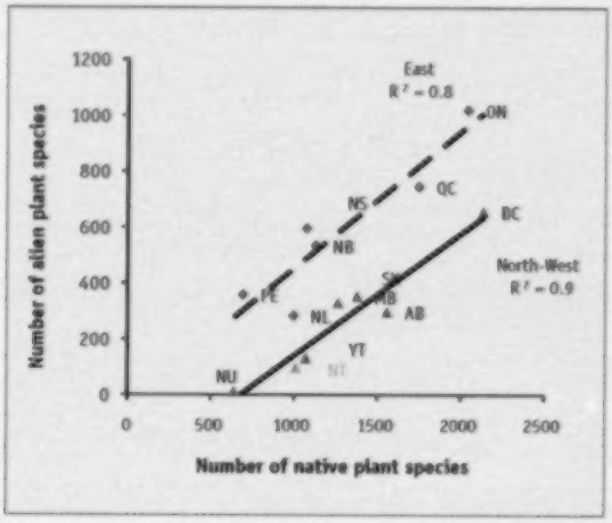
During this evaluation of the general status of NWT species, we learned the following.

About NWT Species

A summary of ranks for each species is presented in the following tables.

- Entomologists are intensively studying insects in the NWT for the first time in 30 years. Each summer brings information on new species that were either overlooked in the 1960-70s, or that are new to the NWT. Some species are found more than 500 km further north than expected.
- The NWT has areas that were not glaciated during the last Ice Age and harbour species that survived that period in the dry and cold Beringia. As noted in 2006 for plants, rare insects and spiders are mostly found in or near these areas.
- Additional alien vascular plants were recorded in the NWT during the past five years, but the percentage of these plants over the total number of vascular plants recorded was similar (10%) to the percentage recorded in 2006. This percentage is expected based on what is found in other northern and western jurisdictions in Canada.
- So far, no aquatic invasive alien plant is known to occur in the NWT. As more areas are disturbed and as more people use lakes and rivers without cleaning their boats and trailers properly, alien and invasive plants and aquatic organisms can arrive in the NWT.

■ Narcissus-flowered Anemone Photo Credit: J Nagy



Summary of 2011 General Status Ranks in species groups for the NWT

Group	Extirpated	At Risk	May Be At Risk	Sensitive	Secure	Undetermined	Not Assessed	Alien	TOTAL [1]	Vagrant	Presence Expected
Terrestrial Mammals	0	1	6	5	41	13	0	0	66	1	1
Marine Mammals	0	0	0	1	3	0	0	0	4	6	0
Birds	0	7	4	40	143	44	0	3	241	42	1
Fishes	0	1	1	6	26	14	42	2	92	5	16
Freshwater Mussels	0	0	0	0	1	1	0	0	2	0	0
Amphibians	0	0	2	1	2	0	0	0	5	0	1
Reptiles	0	0	1	0	0	0	0	0	1	0	1
Ground Beetles (incl. Tiger Beetles)	0	0	1	2	26	189	0	0	218	0	0
Lady Beetles	0	0	0	1	10	16	0	0	27	0	0
Predaceous Diving Beeltes	0	0	0	0	74	48	0	0	122	0	0
Bumblebees	0	0	0	0	3	18	0	0	21	0	0
Butterflies	0	0	0	6	69	16	0	1	92	3	1
Tiger Moths, Silk Moths, Underwing Moths, Sphinx Moths	0	0	0	1	3	26	0	0	30	0	0
Dragonflies and Damselflies	0	0	3	1	31	7	0	0	42	0	0
Mosquitoes	0	0	0	0	19	15	0	0	34	0	0
Blackflies, Horseflies, Deerflies	0	0	0	1	68	14	0	0	83	0	0
Grasshoppers and Katydids	0	0	1	3	13	6	0	0	23	0	0
Spiders	0	0	0	0	32	236	0	0	268	0	0
Vascular Plants	0	0	147	186	596	106	0	116	1151	0	27
Mosses	0	0	39	61	180	218	0	0	498	0	0
Lichens	0	0	19	71	154	81	0	0	325	0	21
TOTAL	**0**	**9**	**224**	**386**	**1494**	**1068**	**42**	**122**	**3345**	**57**	**69**

1 Total number of species known to occur regularly in the NWT. Total number of species ranked: TOTAL - Not Assessed + Presence Expected + Vagrant

Calculations done on entire species only; the ranks for some subspecies, ecotypes or forms are detailed in lists below.

Percent [1] for each group of species

Group	Extirpated	At Risk	May Be At Risk	Sensitive	Secure	Undetermined	Not Assessed	Alien	Vagrant [2]	Presence Expected [2]
Terrestrial Mammals		2%	9%	8%	62%	20%			1%	1%
Marine Mammals				25%	75%				60%	
Birds		3%	2%	17%	59%	18%		1%	15%	
Fishes		1%	1%	7%	28%	15%	51%	2%	4%	14%
Freshwater Mussels					50%	50%				
Amphibians			40%	20%	40%					17%
Reptiles			100%							50%
Ground Beetles (incl. Tiger Beetles)				1%	12%	87%				
Lady Beetles				4%	37%	59%				
Predaceous Diving Beeltes					61%	39%				
Bumblebees					14%	86%				
Butterflies				7%	75%	17%		1%	3%	1%
Tiger Moths, Silk Moths, Underwing Moths, Sphinx Moths				3%	10%	87%				
Dragonflies and Damselflies			7%	2%	74%	17%				
Mosquitoes					56%	44%				
Blackflies, Horseflies, Deerflies				1%	82%	17%				
Grasshoppers			4%	13%	57%	26%		0%		0%
Spiders					12%	88%				
Vascular Plants			13%	16%	52%	9%		10%		2%
Mosses			8%	12%	36%	44%				
Lichens			6%	22%	47%	25%				6%
TOTAL	**0%**	**<1%**	**7%**	**12%**	**45%**	**32%**	**1%**	**4%**	**2%**	**2%**

1 Percent of TOTAL (excluding Vagrant and Presence Expected).

2 Percent of TOTAL + Vagrant + Presence Expected.

About Changes in Ranks between 2006 and 2011

For species that were ranked in 2006 and reviewed for 2011 and for which the rank was modified, we provide the reason for that modification in a "Reason for change" column in the following lists. See *Changing Ranks – Keeping track of changes in the status of NWT species* for more information.

- Most changes in rank resulted from a more rigorous assessment of the perceived threats to vascular plants. Some vascular plant species appear rare because in the NWT they are at the edge of their natural distribution. Where potential threats could not be determined and where more sites were expected, the rank of some vascular plants were corrected to "Undetermined" from "May Be At Risk" to reflect a level of uncertainty.
- New species contributed to 22% of the changes between 2006 and 2011. This is partly the result of increased monitoring and increased sharing of information about species.
- About 5% of changes in the general status rank of species during the last five years can be attributed to a perceived higher risk of extirpation. Changes in perceived risk were recorded for bats and migratory birds. More detailed information is provided in the table below.

About Monitoring

- Enthusiasm for wildlife and biodiversity in general, is great in the North. People are always interested in learning more about living organisms, and the land is a great teacher. Increasing monitoring efforts for the lesser-known groups of species, such as insects and plants, are possible as community members share information and organize new surveys.
- The internet is used extensively to exchange information on species. In the past, high quality photographs of species were rare due to the prohibitive cost of equipment. Today, such photographs are essential to exchange information on species from all corners of the Northwest Territories.
- In the section "8. Further Your Knowledge – How to learn more?" in this report, we included reputable web sites used by experts and biodiversity enthusiasts to exchange information on species. Easy-to-remember e-mail addresses, such as WILDLIFEOBS@gov.nt.ca, NWTBUGS@gov.nt.ca, also facilitate information sharing.
- All information relevant to the general status ranking program is stored in the NWT Species Infobase, the main source of information on NWT species.
- There is not enough information to determine the general status of more than 80% of ground beetles, bumblebees, large moths, and biting insects. Assessing the general status ranks of marine fishes has also proven difficult. New inventories of insects and the results of investigations in the Beaufort Sea during the International Polar Year will provide essential information for assessing the status of these groups of species in the future.

Summary of changes in ranks between 2006 and 2011

Group	UP Risk [a]	DOWN Risk [a]	Correcting Error	New Species	New Information	Taxonomic Change	Changed to Presence Expected	TOTAL	Recent Detailed Assessment
Mammals	2	0	0	3	0	0	0	5	0
Birds	5	0	4	7	3	0	0	19	5
Fishes	0	0	5	0	12	0	1	18	0
Freshwater Mussels	0	0	0	0	0	0	0	0	0
Amphibians	0	0	0	0	2	0	0	1	
Reptiles	0	0	0	0	0	0	1	1	0
Tiger Beetles	0	0	0	0	0	0	0	0	0
Butterflies	0	0	1	1	0	0	0	2	0
Dragonflies and Damselflies	0	0	0	1	0	0	0	1	0
Vascular Plants	0	0	34	18	12	25	0	89	0
TOTAL	7	0	44	30	29	25	2	137	5
%	5%	0%	32%	22%	21%	18%	1%		

a Includes changes to subspecies/ecotypes.

Willow Ptarmigan

Photo Credit
R Kennedy

6. Ranked Species Lists – What are the details?

The general status ranking process results in lists of species with general status ranks. These are detailed in the following pages.

Common Names and Scientific Species Names

Each species is listed using the accepted standard nomenclature for each group. Synonyms, old names, and local names can be found in the NWT Species Monitoring Infobase on **www.nwtspeciesatrisk.ca**. For some species groups, common names were not available. Common names were developed for this report with the help of experts in each species group, based on the scientific names and the species' ecology and distribution.

General Status Ranks

Each species is given a general status rank according to the process described in this report. For some species with very high cultural and economic importance, (e.g., caribou, inconnu, Arctic char) we also provide a rank for each subspecies, population, stock, or ecotype present in the NWT.

Range Notes

All species marked by an "L" have a limited distribution in the NWT as many are at their limit or edge of their natural range. Species marked by an "X" are outside their usual range in the NWT. Extra information on habitat requirements is also provided for fish.

Reasons for Change

Reasons for changing the rank of a species between 2006 and 2011 are noted in the following pages using the codes described in *Data Sources and Methods*.

Detailed Assessments in Canada and the NWT

One of the main objectives of the General Status Ranking Program is to provide a prioritized list of species that "May Be At Risk" and may need to be assessed in a more detailed manner.

The Committee on the Status of Endangered Species in Canada (COSEWIC) performs this detailed assessment for species in Canada. For your convenience, each table provides the COSEWIC status for all species (subspecies or populations) that occur in the NWT and have already been assessed in a detailed manner by COSEWIC as of 2010. Please consult current and additional status assessments on the COSEWIC web page. **Link to www.cosewic.gc.ca**. In Canada, species can be legally listed under the *Species at Risk Act (SARA)*. Legal listing is based on the detailed assessments performed by COSEWIC. NWT species listed in Canada under SARA are not noted in this report; please refer to the official SARA registry for more information. **Link to www.sararegistry.gc.ca**.

In the NWT, the Species at Risk Committee (SARC) is tasked under the *Species At Risk (NWT) Act* to assess species in more detail. As of 2010, no species has been listed under this Act. In future reports, for your convenience, we will add a note on species assessed by SARC. For more information on SARC **Link to www.nwtspeciesatrisk.ca**.

Status Ranking at the Global Level

Species that are in danger of extirpation in the NWT may be quite common in the rest of the world. On the other hand, species that are under threats in other countries may be secure in the NWT. For your convenience, each table provides the Global Rank for species of Global Conservation Concern (G1 - G3) according to NatureServe as of 2010. Please consult current and additional Global Ranks on the NatureServe web page. **Link to www.natureserve.org**.

6.4 Terrestrial

All mammals have fur or body hair, have warm blood, and feed their young with milk. Terrestrial mammals are those species that live on land; those that live in the ocean are grouped together as marine mammals and are ranked in the next list.

Mammals include some of the species that are most important to people in the North for food, for making clothing, tents, boats, and tools, and as a source of income through the sale of furs, hides, crafts, and meat. Due to their importance to people and northern ecosystems, mammals are the most studied species group.

Again in the past five years, some mammal species received particular attention because of their importance to people in the traditional economy or as a result of their population status, or both. For example, caribou continue to be considered 'secure' within the NWT as a species. However, some sub-species of caribou such as Peary caribou and boreal woodland caribou remain ranked as "At Risk". All herds of barren-ground caribou present in the NWT were significantly declining five years ago. Some herd numbers have now stabilised or are showing slow increases, but numbers remain low. So, barren-ground caribou (Dolphin-Union and all other herds in the NWT) retained their rank of 'sensitive" in this report. Considerable time, effort, and money continue to be devoted to the study and management of all types of caribou in the NWT.

In addition to humans, the NWT is currently home to 66 species of terrestrial mammals. Since 2006, three bat species have been added to the list of NWT mammals. The northern long-eared myotis was found in Fort Simpson in 2005. Then the big brown bat and the long-legged myotis were found in 2006 in the Nahanni National Park Reserve. For the first time, in 2010, a major hibernaculum (where bats spend the winter in dormant state) was discovered in

■ Caribou

Photo Credit:
J Nagy/GNWT

On the Land

"Going out on the land for me is like going back to when times were simpler, before computers, internet, and the cell phone made the world smaller. We had to rely on each other when there was a lot more people on the land. Everything was there if you worked for it, with the diminished light during the winter time if you weren't doing something constructive during the day you weren't doing your job. It took everyone to make it work."

– Danny Allaire, Fort Simpson

Mammals

the South Slave Region. The little brown myotis was observed in the cave in a dormant state, and both the big brown bat and the northern long-eared myotis were seen nearby.

Since 2006, in addition to three new species of terrestrial mammals, two ranks were changed for bat species. White-nose syndrome (WNS) is a fungal disease associated with mass die-offs of hibernating bats. It was first observed in North America in 2006. WNS is linked to over one million bat mortalities at many bat hibernacula (caves) in the eastern U.S. and is causing a regional population collapse there. It is spreading rapidly. WNS is not yet found in the NWT, but we know that WNS is decimating bat populations elsewhere and given its current rate of spread, there is a good possibility that it will be in the NWT within the next five years. Due to this imminent and serious threat, the ranks of all species of bats that are known hibernators were changed to "May Be At Risk".

Scientific studies of terrestrial mammals are notoriously expensive, and often limited to a short time span coverage. By complementing scientific studies with local and traditional knowledge acquired and passed down through generations, a deeper and more comprehensive understanding of terrestrial mammal ecology can be reached.

In the NWT, many agencies, boards, community resource councils, and knowledgeable hunters, trappers, and interested residents are working together to find out more about local species of mammals, provide management solutions, and share resources to successfully begin and complete research projects.

Joanna Wilson
Species at Risk Implementation Supervisor

List 1. Terrestrial Mammals

There are 66 species of terrestrial mammals known to occur regularly in the NWT. One additional species, the northern raccoon, is vagrant to the NWT and one species, the eastern red bat, is expected to be present. One terrestrial mammal, polar bear, is of global conservation concern (NatureServe 2010). Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Nomenclature follows Wilson and Reeder 2005.

■ Least Chipmunk Photo Credit: J Nagy

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Artiodactyla – Bovidae					Even-toed ungulates – Bovids
Wood Bison	*Bison bison athabascae* [d]	At Risk			Threatened - 2000
Mountain Goat	*Oreamnos americanus*	May Be At Risk	L		
Muskox	*Ovibos moschatus*	Secure			
Dall's Sheep	*Ovis dalli*	Secure			
Artiodactyla – Cervidae					Even-toed ungulates – Deer-like mammals
Moose	*Alces americanus*	Secure			
Elk	*Cervus elaphus*	Undetermined	L		
Mule Deer	*Odocoileus hemionus*	Undetermined			
White-tailed Deer	*Odocoileus virginianus*	Secure			
Boreal Woodland Caribou	*Rangifer tarandus caribou* [e]	Sensitive			Threatened - 2002
Northern Mountain Woodland Caribou	*Rangifer tarandus caribou* [e]	Secure			Special Concern - 2002
Barrenground Caribou (except Dolphin-Union herd)	*Rangifer tarandus groenlandicus* [e]	Sensitive			
Dolphin Union Barrenground Caribou	*Rangifer tarandus groenlandicus x pearyi (R. t. pearyi x groenlandicus)* [e]	Sensitive	L		Special Concern - 2004
Peary Caribou	*Rangifer tarandus pearyi* [e]	At Risk			Endangered - 2004
Carnivora – Canidae					Carnivores – Dog-like mammals
Coyote	*Canis latrans*	Secure			
Grey Wolf	*Canis lupus* [f]	Secure			*C. l. arctos* = Data Deficient - 1999; *C. l. occidentalis* = Not at Risk - 1999
Arctic Fox	*Vulpes lagopus*	Secure			
Red Fox	*Vulpes vulpes*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Carnivora – Felidae					**Carnivores – Cat-like mammals**
Canada Lynx	*Lynx canadensis*	Secure			Not at Risk - 2001
Mountain Lion	*Puma concolor*	Undetermined	L		
Carnivora – Mephitidae					**Carnivores – Skunks**
Striped Skunk	*Mephitis mephitis*	Undetermined			
Carnivora – Mustelidae					**Carnivores – Mustelids**
Wolverine	*Gulo gulo*	Sensitive			Western population = Special Concern - 2004
North American River Otter	*Lontra canadensis*	Secure			
Marten	*Martes americana*	Secure			
Fisher	*Martes pennanti*	Sensitive			
Ermine (Stoat)	*Mustela erminea*	Secure			
Least Weasel	*Mustela nivalis*	Secure			
American Mink	*Neovison vison*	Secure			
Carnivora – Procyonidae					**Carnivores – Raccoons**
Northern Raccoon	*Procyon lotor*	Vagrant	X		
Carnivora – Ursidae					**Carnivores – Bears**
Black Bear	*Ursus americanus*	Secure			Not at Risk - 1999
Grizzly Bear	*Ursus arctos*	Sensitive			Special Concern - 2008
Polar Bear	*Ursus maritimus*	Sensitive			Special Concern - 2008 / G3 - 2008
Chiroptera – Vespertilionidae					**Hand-winged mammals – Vesper bats**
Big Brown Bat	*Eptesicus fuscus*	Undetermined	L	#	
Eastern Red Bat	*Lasiurus borealis* [h]	Presence Expected			
Hoary Bat	*Lasiurus cinereus*	Undetermined	L		
Western Long-eared Myotis	*Myotis evotis*	May Be At Risk	L	#	
Little Brown Myotis	*Myotis lucifugus*	May Be At Risk	L	↗[i]	
Northern Long-eared Myotis	*Myotis septentrionalis*	May Be At Risk	L	↗[i]	
Long-legged Myotis	*Myotis volans*	May Be At Risk	L	#	
Lagomorpha – Leporidae					**Hare-like mammals – Hares**
Snowshoe Hare	*Lepus americanus*	Secure			
Arctic Hare	*Lepus arcticus*	Secure			
Lagomorpha – Ochotonidae					**Hare-like mammals – Pikas**
Collared Pika	*Ochotona collaris*	Sensitive			

6.1 Terrestrial Mammals

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Rodentia – Castoridae					**Rodents – Beavers**
Beaver	*Castor canadensis*	Secure			
Rodentia – Dipodidae					**Rodents – Jumping Mice**
Meadow Jumping Mouse	*Zapus hudsonius*	Undetermined			
Rodentia – Erethizontidae					**Rodents – New World Porcupines**
North American Porcupine	*Erethizon dorsata*	Secure			
Rodentia – Cricetidae					**Rodents – Voles and relatives**
Nearctic Collared Lemming	*Dicrostonyx groenlandicus* [d]	Secure			
Richardson's Collared Lemming	*Dicrostonyx richardsoni*	Undetermined			
Neoarctic Brown Lemming	*Lemmus trimucronatus*	Secure			
Long-tailed Vole	*Microtus longicaudus*	Undetermined			
Singing Vole	*Microtus miurus*	Undetermined			
Tundra Vole	*Microtus oeconomus*	Secure			
Meadow Vole	*Microtus pennsylvanicus*	Secure			
Taiga Vole (Root Vole)	*Microtus xanthognathus*	Secure			
Southern Red-backed Vole	*Myodes gapperi*	Secure			
Northern Red-backed Vole	*Myodes rutilus*	Secure			
Bushy-tailed Woodrat	*Neotoma cinerea*	Undetermined			
Common Muskrat	*Ondatra zibethicus*	Secure			
North American Deer Mouse	*Peromyscus maniculatus*	Secure			
Eastern Heather Vole	*Phenacomys ungava*	Secure			
Northern Bog Lemming	*Synaptomys borealis*	Secure			
Rodentia – Sciuridae					**Rodents – Squirrel-like mammals**
Northern Flying Squirrel	*Glaucomys sabrinus*	Secure			
Hoary Marmot	*Marmota caligata*	Undetermined	L		
Woodchuck	*Marmota monax*	Secure			
Least Chipmunk	*Tamias minimus*	Secure			
Arctic Ground Squirrel	*Spermophilus parryii*	Secure			
Red Squirrel	*Tamiasciurus hudsonicus*	Secure			
Soricomorpha – Soricidae					**Shrew-like mammals – Shrews**
Arctic Shrew	*Sorex arcticus*	Secure			
Cinereus Shrew	*Sorex cinereus*	Secure			
American Pygmy Shrew	*Sorex hoyi*	Secure			
Dusky Shrew	*Sorex monticolus*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
American Water Shrew	*Sorex palustris*	Secure			
Tundra Shrew	*Sorex tundrensis*	Undetermined			
Barren-Ground Shrew	*Sorex ugyunak*	Undetermined			

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, II: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

d General Status Rank is given for wood bison only. The subspecies plains bison *(B. b. bison)*, including suspected hybrids of plains-wood bison *(B. b. bison x athabascae)* are "not assessed".

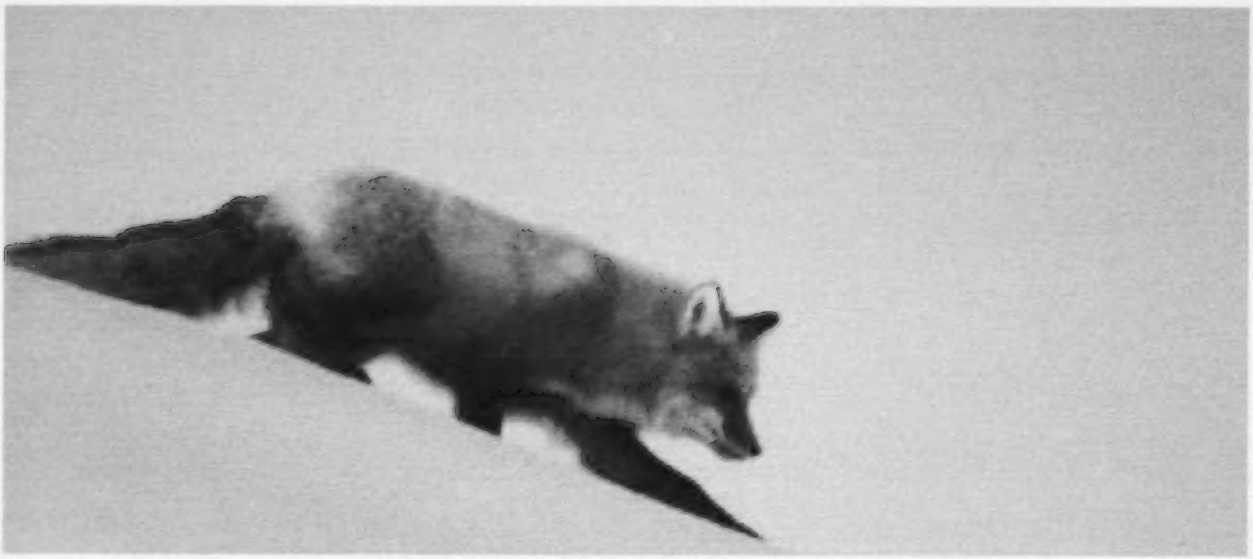
e General Status Ranks are given for 4 caribou ecotypes separately. The species caribou (*Rangifer tarandus*) was recorded as "secure".

f Species includes two subspecies: arctic grey Wolf (*C. l. arctos*) ranked as "undetermined" and boreal grey wolf *(C. l. occidentalis)* ranked as "secure".

g *Dicrostonyx groenlandicus* (nearctic collared lemming) includes the previously recognized taxa *D. groenlandicus* (Peary Land collared lemming) and *D. kilangmiutak* (Victoria collared lemming).

h Possible identification of eastern red bat using ecolocation detectors in Nahanni National Park Reserve (2006), no specimen confirmed.

1 Changed from At Risk
2 Changed from May Be At Risk
3 Changed from Sensitive
4 Changed from Secure
5 Changed from Undetermined
6 Changed from Not Assessed
7 Changed from Alien
8 Changed from Extirpated
9 Changed from Vagrant



■ Red Fox

Photo Credit: R Kennedy

■ Ringed Seal
Photo Credit: DFO

6.2 Marine Mammals

Like all mammals, marine mammals are vertebrates, have mammary glands to produce milk and feed their young, and are warm-blooded (endothermic). Unlike terrestrial mammals, marine mammals are adapted for life in water. They are streamlined for swimming and can dive for long periods of time, although, like other mammals, they breathe air and surface from time to time to renew their oxygen supply.

Two groups of marine mammals occur in the NWT sections of the Beaufort Sea and Arctic Ocean. Whales are part of the *Order* Cetacea, and are seasonal migrants to the western Arctic. Seals are year-round residents, and are part of the *Order* Carnivora. Our waters harbour fewer species of marine mammals than are found in the eastern Arctic: four species are found regularly in western Arctic, compared with 10 in the eastern Arctic.

Two species of whales occur regularly in the waters offshore the NWT; the bowhead whale and the beluga whale. An additional three species of cetaceans are also known to occur in NWT waters. The NWT portion of the Beaufort Sea is home to two species of phocids, or true seals: the ringed seal and the bearded seal. In addition, the walrus, northern fur seal and harbour seal have been recorded in the western Arctic, although rarely. The general status ranks did not change in 2010. One species, the bowhead whale, is ranked as "Sensitive" in the NWT.

Today, as in the past, marine mammals are an important nutritional and cultural resource for Aboriginal harvesters and their families. Research and stock assessment programs monitor harvests and stocks, to ensure that stocks are stable and healthy. Marine mammals are also becoming increasingly important for eco-tourism, and monitoring is used to manage potential effects of this activity as well. Increasing industrial development in the offshore Beaufort Sea may adversely affect marine mammals, particularly through ensonification of important offshore habitats by industrial underwater noise. The potential cumulative impacts of such developments on marine mammals are an area of concern and are being monitored.

Seals and beluga are reasonable indicators of environmental quality and change, as they are positioned high in the food chain and are known to ingest and accumulate contaminants. The levels of contaminants, such as mercury, provide an indication of natural and anthropogenic substances found in Arctic waters or other parts of their range where they feed.

Current research on marine mammals in the NWT includes harvest monitoring, assessment of effects of industry, and documenting habitat use, movements and behaviour with satellite tracking. Involvement of northerners in management, research and monitoring programs is an important aspect of these programs, providing much needed information regarding marine mammals in the NWT.

Lois Harwood
Fisheries and Oceans Canada
Yellowknife, NT

List 2. Marine Mammals

Four species of marine mammals can be found regularly in NWT marine waters – the Beaufort Sea and Arctic Ocean. Six additional species are vagrant and seen only rarely. One marine mammal in the NWT, the bowhead whale, is of global conservation concern. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Nomenclature follows Wilson and Reeder 2005.

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Carnivora – Odobenidae					Carnivores - Walrus
Walrus	*Odobenus rosmarus*	Vagrant	X		
Carnivora – Otariidae					Carnivores – Eared Seals
Northern Fur Seal	*Callorhinus ursinus*	Vagrant	X		Threatened - 2010
Carnivora – Phocidae					Carnivores – True Seals
Bearded Seal	*Erignathus barbatus*	Secure			Not at Risk - 1994
Harbour Seal	*Phoca vitulina*	Vagrant	X		Arctic and Atlantic = Data Deficient - 1999
Ringed Seal	*Pusa hispida*	Secure			Not at Risk - 1989
Cetacea – Balaenidae					Whales – Baleen whales
Bowhead Whale	*Balaena mysticetus*	Sensitive			Bering-Chukchi-Beaufort population = Special Concern - 2005 /G3 - 2003
Cetacea – Delphinidae					Whales – Dolphins and relatives
Killer Whale	*Orcinus orca*	Vagrant	X		
Cetacea – Eschrichtiidae					Whales – Gray whales
Grey Whale	*Eschrichtius robustus*	Vagrant	X		Special Concern - 2004
Cetacea – Monodontidae					Whales – White whales
White Whale (Beluga)	*Delphinapterus leucas*	Secure			Beaufort = Not at Risk - 2004
Narwhal	*Monodon monoceros*	Vagrant	X		Special Concern - 2004

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, Ǝ: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, II: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

1 Changed from At Risk
2 Changed from May Be At Risk
3 Changed from Sensitive
4 Changed from Secure
5 Changed from Undetermined
6 Changed from Not Assessed
7 Changed from Alien
8 Changed from Extirpated
9 Changed from Vagrant

6.3 Birds

Bird conservation in the Northwest Territories (NWT) is more active than ever. Up-to-date general status ranks of bird species in the NWT are important for informing bird conservation actions.

Bird Conservation Region (BCR) Planning

BCR planning is part of the North American Bird Conservation Initiative (NABCI). BCRs are defined by ecological boundaries, of which four are represented in the NWT; Arctic Plains and Mountains, Boreal Taiga Plains, Taiga Shield and Hudson Plains, and to a lesser extent the Northwestern Interior Forest (in the Mackenzie Mountains). Each BCR plan will have a set of management actions with conservation priorities that range from 'stewardship' to 'high priority'. The general status ranks of bird species in the NWT are part of the decision process in assigning the conservation priorities for these BCR plans.

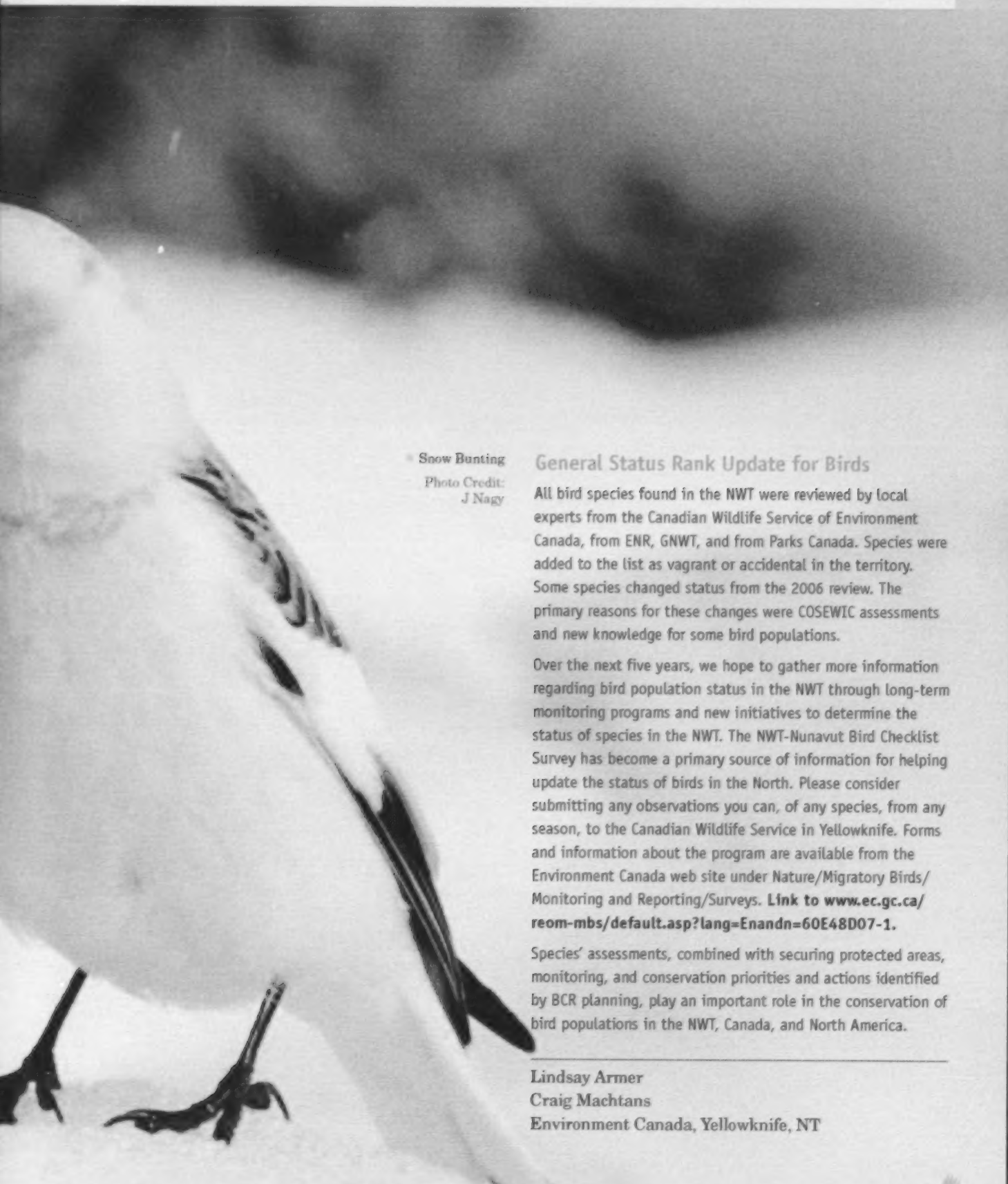
For more information on BCRs and region specific plans, **link to www.nabci-us.org/map.html.**

NWT Protected Areas Strategy (PAS)

Bird inventories have been completed for all six candidate protected areas that Environment Canada is formally sponsoring under the NWT PAS. These candidate protected areas may eventually provide permanent habitat protection for migratory birds under the *Canada Wildlife Act* as National Wildlife Areas. These inventories provided information for the latest update of the general status of birds. For more information on PAS, **link to www.nwtpas.ca.**

Population Declines of Migratory Birds

Across Canada, common nighthawk has declined by 49%, olive-sided flycatcher by 79% over 37 years, and Canada warbler by 43% over a ten-year period. All three species have been assessed as 'Threatened' in Canada and are on Schedule 1 of the federal *Species At Risk Act*. Accordingly, these species now have a general status rank of "At Risk" in the NWT.



Snow Bunting
Photo Credit:
J Nagy

General Status Rank Update for Birds

All bird species found in the NWT were reviewed by local experts from the Canadian Wildlife Service of Environment Canada, from ENR, GNWT, and from Parks Canada. Species were added to the list as vagrant or accidental in the territory. Some species changed status from the 2006 review. The primary reasons for these changes were COSEWIC assessments and new knowledge for some bird populations.

Over the next five years, we hope to gather more information regarding bird population status in the NWT through long-term monitoring programs and new initiatives to determine the status of species in the NWT. The NWT-Nunavut Bird Checklist Survey has become a primary source of information for helping update the status of birds in the North. Please consider submitting any observations you can, of any species, from any season, to the Canadian Wildlife Service in Yellowknife. Forms and information about the program are available from the Environment Canada web site under Nature/Migratory Birds/ Monitoring and Reporting/Surveys. **Link to www.ec.gc.ca/ reom-mbs/default.asp?lang=Enandn=60E48D07-1.**

Species' assessments, combined with securing protected areas, monitoring, and conservation priorities and actions identified by BCR planning, play an important role in the conservation of bird populations in the NWT, Canada, and North America.

Lindsay Armer
Craig Machtans
Environment Canada, Yellowknife, NT

List 3. Birds

A total of 241 species of birds can be observed regularly in the NWT; an additional 42 species are vagrant and have been observed irregularly, sometimes only once. One additional species is expected to be present. Two species are of global conservation concern. Species are listed alphabetically according to *Family* organized taxonomically according to the updated 7th North American bird list published by the American Ornithologist Union (AOU). Nomenclature follows AOU (2010).

Savanah Sparrow — Photo Credit: J Nagy

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Anseriformes – Anatidae					Waterfowl – Ducks and Geese
Northern Pintail	*Anas acuta*	Sensitive			
American Wigeon	*Anas americana*	Secure			
Northern Shoveler	*Anas clypeata*	Secure			
Green-winged Teal	*Anas crecca*	Secure			
Cinnamon Teal	*Anas cyanoptera*	Vagrant	X	#	
Blue-winged Teal	*Anas discors*	Secure			
Eurasian Wigeon	*Anas penelope*	Vagrant	X		
Mallard	*Anas platyrhynchos*	Secure			
American Black Duck	*Anas rubripes*	Vagrant	X	#	
Gadwall	*Anas strepera*	Undetermined			
Greater White-fronted Goose	*Anser albifrons*	Secure			
Lesser Scaup	*Aythya affinis*	Sensitive			
Redhead	*Aythya americana*	Secure	L		
Ring-necked Duck	*Aythya collaris*	Secure			
Greater Scaup	*Aythya marila*	Secure			
Canvasback	*Aythya valisineria*	Secure			
Brant	*Branta bernicla*	Sensitive			
Canada Goose	*Branta canadensis*	Secure			
Cackling Goose	*Branta hutchinsii*	Secure			
Bufflehead	*Bucephala albeola*	Secure			
Common Goldeneye	*Bucephala clangula*	Secure			
Barrow's Goldeneye	*Bucephala islandica*	Secure			
Snow Goose	*Chen caerulescens*	Secure			
Ross's Goose	*Chen rossii*	Secure	L		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Long-tailed Duck	*Clangula hyemalis*	Sensitive			
Trumpeter Swan	*Cygnus buccinator*	Sensitive			Not at Risk - 1996
Tundra Swan	*Cygnus columbianus*	Secure			
Harlequin Duck	*Histrionicus histrionicus*	May Be At Risk			
Hooded Merganser	*Lophodytes cucullatus*	Secure	L		
Black Scoter	*Melanitta americana*	Sensitive	L		
White-winged Scoter	*Melanitta fusca*	Sensitive			
Surf Scoter	*Melanitta perspicillata*	Sensitive			
Common Merganser	*Mergus merganser*	Secure			
Red-breasted Merganser	*Mergus serrator*	Secure			
Ruddy Duck	*Oxyura jamaicensis*	Secure			
Common Eider	*Somateria mollissima*	Sensitive			
King Eider	*Somateria spectabilis*	Sensitive			
Galliformes – Phasianidae					**Chicken-like birds – Grouse and relatives**
Ruffed Grouse	*Bonasa umbellus*	Secure			
Dusky Grouse	*Dendragapus obscurus*	Undetermined	L		
Spruce Grouse	*Falcipennis canadensis*	Secure			
Willow Ptarmigan	*Lagopus lagopus*	Secure			
White-tailed Ptarmigan	*Lagopus leucura*	Undetermined	L		
Rock Ptarmigan	*Lagopus muta*	Secure			
Sharp-tailed Grouse	*Tympanuchus phasianellus*	Secure			
Gaviiformes – Gaviidae					**Loons – Loons**
Yellow-billed Loon	*Gavia adamsii*	Undetermined			
Common Loon	*Gavia immer*	Secure			
Pacific Loon	*Gavia pacifica*	Secure			
Red-throated Loon	*Gavia stellata*	Secure			
Podicipediformes – Podicipedidae					**Grebes – Grebes**
Horned Grebe	*Podiceps auritus*	Sensitive		A, ↗[d]	Special Concern - 2009
Red-necked Grebe	*Podiceps grisegena*	Secure			
Eared Grebe	*Podiceps nigricollis*	Vagrant	X		
Pied-billed Grebe	*Podilymbus podiceps*	Sensitive			
Suliformes – Phalacrocoracidae					**Booby-like birds – Cormorants**
Double-crested Cormorant	*Phalacrocorax auritus*	Undetermined	L		
Pelecaniformes – Pelecanidae					**Pelican- like birds – Pelicans**
American White Pelican	*Pelecanus erythrorhynchos*	May Be At Risk	L		
Pelecaniformes – Ardeidae					**Pelican-like birds – Herons**
Great Egret	*Ardea alba*	Vagrant	X		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Great Blue Heron	*Ardea herodias*	Vagrant	X		
American Bittern	*Botaurus lentiginosus*	Sensitive			
Cattle Egret	*Bubulcus ibis*	Vagrant	X		
Snowy Egret	*Egretta thula*	Vagrant	X		
Black-crowned Night-Heron	*Nycticorax nycticorax*	Vagrant	X	#	
Accipitriformes – Cathartidae					Hawk-like birds of prey – American Vultures
Turkey Vulture	*Cathartes aura*	Vagrant	X		
Accipitriformes – Pandionidae					Hawk-like birds of prey – Osprey
Osprey	*Pandion haliaetus*	Secure			
Accipitriformes – Accipitridae					Hawk-like birds of prey – Hawks
Northern Goshawk	*Accipiter gentilis*	Secure			Not at Risk - 1995
Sharp-shinned Hawk	*Accipiter striatus*	Secure			Not at Risk - 1997
Golden Eagle	*Aquila chrysaetos*	Secure			Not at Risk - 1996
Red-tailed Hawk	*Buteo jamaicensis*	Secure			Not at Risk - 1995
Rough-legged Hawk	*Buteo lagopus*	Secure			Not at Risk - 1995
Broad-winged Hawk	*Buteo platypterus*	Undetermined	L		Not at Risk - 1995
Swainson's Hawk	*Buteo swainsoni*	Undetermined	L		Not at Risk - 1995
Northern Harrier	*Circus cyaneus*	Secure			Not at Risk - 1993
Bald Eagle	*Haliaeetus leucocephalus*	Secure			Not at Risk - 1984
Falconiformes – Falconidae					Birds of Prey – Falcons
Merlin	*Falco columbarius*	Secure			Not at Risk - 1985
Peregrine Falcon	*Falco peregrinus*	Sensitive			Special Concern - 2007
Gyrfalcon	*Falco rusticolus*	Secure			Not at Risk - 1987
American Kestrel	*Falco sparverius*	Secure			
Gruiformes – Rallidae					Crane-like birds – Rails and relatives
Yellow Rail	*Coturnicops noveboracensis*	May Be At Risk			Special Concern - 2009
American Coot	*Fulica americana*	Secure			
Sora	*Porzana carolina*	Secure			
Virgina Rail	*Rallus limicola*	Vagrant	X		
Gruiformes – Gruidae					Crane-like birds – Cranes
Whooping Crane	*Grus americana*	At Risk			Endangered – 2010/ G1 - 2008
Sandhill Crane	*Grus canadensis*	Secure			
Charadriiformes – Charadriidae					Shore-dwelling birds – Plovers
Semipalmated Plover	*Charadrius semipalmatus*	Secure			
Killdeer	*Charadrius vociferus*	Secure			
American Golden Plover	*Pluvialis dominica*	Sensitive			
Black-bellied Plover	*Pluvialis squatarola*	Sensitive			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Charadriiformes – Recurvirostridae					Shore-dwelling birds – Avocets
American Avocet	*Recurvirosta americana*	Undetermined	L	3[6]	
Charadriiformes – Scolopacidae					Shore-dwelling birds – Waders
Spotted Sandpiper	*Actitis macularius*	Secure			
Surfbird	*Aphriza virgata*	Vagrant	X		
Ruddy Turnstone	*Arenaria interpres*	Sensitive			
Upland Sandpiper	*Bartramia longicauda*	Undetermined			
Sanderling	*Calidris alba*	Sensitive			
Dunlin	*Calidris alpina*	Sensitive	L		
Baird's Sandpiper	*Calidris bairdii*	Secure			
Red Knot	*Calidris canutus*	At Risk		A, ↗[2]	Endangered - 2007 (ssp. *rufa*); Special Concern - 2007 (ssp. *islandica*); Threatened - 2007 (ssp. *rosellari*)
White-rumped Sandpiper	*Calidris fuscicollis*	Secure			
Stilt Sandpiper	*Calidris himantopus*	Secure		ⓘ[5]	
Purple Sandpiper	*Calidris maritima*	Undetermined	L		
Western Sandpiper	*Calidris mauri*	Vagrant	X		
Pectoral Sandpiper	*Calidris melanotos*	Secure			
Least Sandpiper	*Calidris minutilla*	Sensitive			
Semipalmated Sandpiper	*Calidris pusilla*	Sensitive			
Wilson's Snipe	*Gallinago delicata*	Secure		ⓘ[5]	
Wandering Tattler	*Heteroscelus incanus*	Undetermined	L		
Short-billed Dowitcher	*Limnodromus griseus*	Undetermined			
Long-billed Dowitcher	*Limnodromus scolopaceus*	Sensitive			
Marbled Godwit	*Limosa fedoa*	Vagrant	X		
Hudsonian Godwit	*Limosa haemastica*	Sensitive			
Bar-tailed Godwit	*Limosa lapponica*	Vagrant	X		
Long-billed Curlew	*Numenius americanus*	Vagrant	X		
Eskimo Curlew	*Numenius borealis*	At Risk			Endangered - 2009/ GH - 2002
Whimbrel	*Numenius phaeopus*	Sensitive			
Red Phalarope	*Phalaropus fulicaria*	Sensitive			
Red-necked Phalarope	*Phalaropus lobatus*	Sensitive			
Wilson's Phalarope	*Phalaropus tricolor*	Undetermined	L		
Ruff	*Philomachus pugnax*	Vagrant	X		
Lesser Yellowlegs	*Tringa flavipes*	Sensitive			
Greater Yellowlegs	*Tringa melanoleuca*	Undetermined			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Willet	*Tringa semipalmata*	Vagrant	X		
Solitary Sandpiper	*Tringa solitaria*	Undetermined			
Buff-breasted Sandpiper	*Tryngites subruficollis*	Sensitive			
Charadriiformes – Laridae					**Water-dwelling birds – Gulls**
Black Tern	*Chlidonias niger*	Sensitive			Not at Risk - 1996
Bonaparte's Gull	*Chroicophalus philadelphia*	Secure			
Caspian Tern	*Hydroprogne caspia*	Sensitive			Not at Risk - 1999
Herring Gull	*Larus argentatus*	Secure			
California Gull	*Larus californicus*	Secure			
Mew Gull	*Larus canus*	Secure			
Black-tailed Gull	*Larus crassirostris*	Vagrant	X		
Ring-billed Gull	*Larus delawarensis*	Secure			
Lesser Black-backed Gull	*Larus fuscus*	Vagrant	X	#	
Glaucous-winged Gull	*Larus glaucescens*	Vagrant	X		
Glaucous Gull	*Larus hyperboreus*	Secure			
Slaty-backed Gull	*Larus schistisagus*	Vagrant	X		
Thayer's Gull	*Larus thayeri*	Secure			
Franklin's Gull	*Leucophaeus pipixcan*	Undetermined	L	3[d]	
Ivory Gull	*Pagophila eburnea*	At Risk	L		Endangered - 2006
Ross's Gull	*Rhodostethia rosea*	Vagrant	X		Threatened - 2001
Black-legged Kittiwake (Atlantic Kittiwake)	*Rissa tridactyla*	Undetermined	L		
Common Tern	*Sterna hirundo*	Secure			Not at Risk - 1998
Arctic Tern	*Sterna paradisaea*	Secure			
Sabine's Gull	*Xema sabini*	Secure			
Charadriiformes – Stercorariidae					**Water-dwelling birds – Jeagers**
Long-tailed Jaeger	*Stercorarius longicaudus*	Undetermined			
Parasitic Jaeger	*Stercorarius parasiticus*	Undetermined			
Pomarine Jaeger	*Stercorarius pomarinus*	Undetermined			
Charadriiformes – Alcidae					**Water-dwelling birds – Auks and relatives**
Black Guillemot	*Cepphus grylle*	Undetermined			
Thick-billed Murre (Brünnich's Murre)	*Uria lamvia*	Sensitive			
Columbiformes – Columbidae					**Dove-like birds – Pigeons and Doves**
Rock Pigeon	*Columba livia*	Alien	X		
Mourning Dove	*Zenaida macroura*	Vagrant	X		
Strigiformes – Strigidae					**Owl-like birds – Typical Owls**
Boreal Owl	*Aegolius funereus*	Secure			Not at Risk - 1995
Short-eared Owl	*Asio flammeus*	Sensitive			Special Concern - 2008

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Long-eared Owl	*Asio otus*	Undetermined			
Snowy Owl	*Bubo scandiacus*	Secure			Not at Risk - 1995
Great Horned Owl	*Bubo virginianus*	Secure			
Great Grey Owl	*Strix nebulosa*	Secure			Not at Risk - 1996
Barred Owl	*Strix varia*	Undetermined	L		
Northern Hawk Owl	*Surnia ulula*	Secure			Not at Risk - 1992
Caprimulgiformes – Caprimulgidae					**Nightbirds – Nighthawks**
Common Nighthawk	*Chordeiles minor*	At Risk		A, ↗[4]	Threatened - 2007
Apodiformes – Trochilidae					**Swift-like birds – Hummingbirds**
Rufous Hummingbird	*Selasphorus rufus*	Vagrant	X		
Calliope Hummingbird	*Stellula calliope*	Vagrant	X		
Coraciiformes – Alcedinidae					**Kingfishers – Kingfishers**
Belted Kingfisher	*Megaceryle alcyon*	Secure			
Piciformes – Picidae					**Woodpecker-like birds – Woodpeckers and relatives**
Northern Flicker	*Colaptes auratus*	Secure			
Pileated Woodpecker	*Dryocopus pileatus*	Secure			
Black-backed Woodpecker	*Picoides arcticus*	Secure			
American Three-toed Woodpecker	*Picoides dorsalis*	Secure			
Downy Woodpecker	*Picoides pubescens*	Secure			
Hairy Woodpecker	*Picoides villosus*	Secure			
Yellow-bellied Sapsucker	*Sphyrapicus varius*	Secure			
Passeriformes – Tyrannidae					**Perching birds – Tyrant Flycatchers**
Olive-sided Flycatcher	*Contopus cooperi*	At Risk		A, ↗[3]	Threatened - 2007
Western Wood-Pewee	*Contopus sordidulus*	Secure			
Alder Flycatcher	*Empidonax alnorum*	Secure			
Yellow-bellied Flycatcher	*Empidonax flaviventris*	Secure			
Hammond's Flycatcher	*Empidonax hammondii*	Secure	L		
Least Flycatcher	*Empidonax minimus*	Secure			
Dusky Flycatcher	*Empidonax oberholseri*	Undetermined	L		
Ash-throated Flycatcher	*Myiarchus cinerascens*	Vagrant	X	#	
Eastern Phoebe	*Sayornis phoebe*	Secure			
Say's Phoebe	*Sayornis saya*	Undetermined			
Eastern Kingbird	*Tyrannus tyrannus*	Secure			
Western Kingbird	*Tyrannus verticalis*	Vagrant	X		
Passeriformes – Laniidae					**Perching birds – Shrikes**
Northern Shrike	*Lanius excubitor*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Passeriformes – Vireonidae					**Perching birds – Vireos and relatives**
Warbling Vireo	*Vireo gilvus*	Secure			
Red-eyed Vireo	*Vireo olivaceus*	Secure			
Philadelphia Vireo	*Vireo philadelphicus*	Undetermined	L		
Blue-headed Vireo	*Vireo solitarius*	Secure			
Passeriformes – Corvidae					**Perching birds – Ravens and relatives**
American Crow	*Corvus brachyrhynchos*	Secure			
Common Raven	*Corvus corax*	Secure			
Gray Jay	*Perisoreus canadensis*	Secure			
Black-billed Magpie	*Pica hudsonia*	Secure			
Passeriformes – Alaudidae					**Perching birds – Larks**
Horned Lark	*Eremophila alpestris*	Secure			
Passeriformes – Hirundinidae					**Perching birds – Swallows**
Barn Swallow	*Hirundo rustica*	Sensitive			
Cliff Swallow	*Petrochelidon phyrrhonota*	Secure			
Bank Swallow	*Riparia riparia*	Secure			
Tree Swallow	*Tachycineta bicolor*	Secure			
Violet-green Swallow	*Tachycineta thalassina*	Undetermined			
Passeriformes – Paridae					**Perching birds – Chickadees and relatives**
Black-capped Chickadee	*Poecile atricapillus*	Secure			
Gray-headed Chickadee	*Poecile cincta*	May Be At Risk	L		
Boreal Chickadee	*Poecile hudsonica*	Sensitive			
Passeriformes – Sittidae					**Perching birds – Nuthatches**
Red-breasted Nuthatch	*Sitta canadensis*	Secure			
Passeriformes – Certhidae					**Perching birds – Creepers**
Brown Creeper	*Certhia americana*	Undetermined	L	#	
Passeriformes – Troglodytidae					**Perching birds – Wrens**
Marsh Wren	*Cistothorus palustris*	Undetermined	L		
Winter Wren	*Troglodytes hiemalis*	Secure	L		
Passeriformes – Cinclidae					**Perching birds – Dippers**
American Dipper	*Cinclus mexicanus*	Undetermined			
Passeriformes – Regulidae					**Perching birds – Kinglets**
Ruby-crowned Kinglet	*Regulus calendula*	Secure			
Golden-crowned Kinglet	*Regulus satrapa*	Undetermined	L		
Passeriformes – Phylloscopidae					**Perching birds – Leaf Warblers**
Arctic Warbler	*Phylloscopus borealis*	Vagrant	X		

Common Name	Scientific Species Name	Status Rank	Range Note[4]	Reason for Change[5]	COSEWIC Status/ Global Conservation Concern[6]
Passeriformes – Turdidae					**Perching birds – Thrushes**
Hermit Thrush	*Catharus guttatus*	Secure			
Gray-cheeked Thrush	*Catharus minimus*	Secure			
Swainson's Thrush	*Catharus ustulatus*	Secure			
Varied Thrush	*Ixoreus naevius*	Undetermined			
Bluethroat	*Luscinia svecica*	Vagrant	X	II	
Townsend's Solitaire	*Myadestes townsendi*	Secure		ⓘ[5]	
Northern Wheatear	*Oenanthe oenanthe*	Undetermined	L		
Mountain Bluebird	*Sialia currucoides*	Undetermined			
American Robin	*Turdus migratorius*	Secure			
Passeriformes – Mimidae					**Perching birds – Mockingbirds and relatives**
Grey Catbird	*Dumetella carolinensis*	Vagrant	X	3[6]	
Northern Mockingbird	*Minus polyglottos*	Vagrant	X		
Brown Thrasher	*Toxostoma rufum*	Vagrant	X		
Passeriformes – Sturnidae					**Perching birds – Starlings**
European Starling	*Sturnus vulgaris*	Alien	X		
Passeriformes – Motacillidae					**Perching birds – Pipits and Wagtails**
American Pipit	*Anthus rubescens*	Sensitive			
Eastern Yellow Wagtail	*Motacilla tschtschensis*	Presence Expected	L		
Passeriformes – Bombycillidae					**Perching birds – Waxwings**
Cedar Waxwing	*Bombycilla cedrorum*	Secure	L		
Bohemian Waxwing	*Bombycilla garrulus*	Secure			
Passeriformes – Calcariidae					**Perching birds – Longspurs and relatives**
Lapland Longspur	*Calcarius lapponicus*	Secure			
Smith's Longspur	*Calcarius pictus*	Undetermined			
Snow Bunting	*Plectrophenax nivalis*	Secure			
Passeriformes – Parulidae					**Perching birds – New World Warblers**
Bay-breasted Warbler	*Dendroica castanea*	Secure			
Yellow-rumped Warbler	*Dendroica coronata*	Secure			
Magnolia Warbler	*Dendroica magnolia*	Secure			
Palm Warbler	*Dendroica palmarum*	Secure			
Yellow Warbler	*Dendroica petechia*	Secure			
Blackpoll Warbler	*Dendroica striata*	Sensitive			
Cape May Warbler	*Dendroica tigrina*	Secure			
Townsend's Warbler	*Dendroica townsendi*	Vagrant	X	3[5]	
Common Yellowthroat	*Geothlypis trichas*	Secure			
Black-and-white Warbler	*Mniotilta varia*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Connecticut Warbler	*Oporornis agilis*	Undetermined	L		
Mourning Warbler	*Oporornis philadelphia*	Undetermined	L		
Orange-crowned Warbler	*Oreothlypis celata*	Secure			
Tennessee Warbler	*Oreothlypis peregrina*	Secure			
Northern Waterthrush	*Parkesia noveboracensis*	Secure			
Ovenbird	*Seiurus aurocapilla*	Secure			
American Redstart	*Setophaga ruticilla*	Secure			
Canada Warbler	*Wilsonia canadensis*	At Risk	L	A, ↗[5]	Threatened - 2008
Wilson's Warbler	*Wilsonia pusilla*	Secure			
Passeriformes – Thraupidae					Perching birds – Tanagers
Western Tanager	*Piranga ludovicana*	Secure			
Passeriformes – Emberizidae					Perching birds – Sparrows and relatives
Le Conte's Sparrow	*Ammodramus leconteii*	Secure			
Nelson's Sparrow	*Ammodramus nelsoni*	Undetermined	L		
Lark Sparrow	*Chondestes grammacus*	Vagrant	X		
Dark-eyed Junco	*Junco hyemalis*	Secure			
Swamp Sparrow	*Melospiza georgiana*	Secure			
Lincoln's Sparrow	*Melospiza lincolnii*	Secure			
Song Sparrow	*Melospiza melodia*	Undetermined			
Savannah Sparrow	*Passerculus sandwichensis*	Secure			
Fox Sparrow	*Passerella iliaca*	Secure			
Vesper Sparrow	*Pooecetes gramineus*	Undetermined	L		
American Tree Sparrow	*Spizella arborea*	Sensitive			
Clay-coloured Sparrow	*Spizella pallida*	Undetermined			
Chipping Sparrow	*Spizella passerina*	Secure			
White-throated Sparrow	*Zonotrichia albicollis*	Sensitive			
Golden-crowned Sparrow	*Zonotrichia atricapilla*	Secure	L		
White-crowned Sparrow	*Zonotrichia leucophrys*	Secure			
Harris's Sparrow	*Zonotrichia querula*	Sensitive			
Passeriformes – Cardinalidae					Perching birds – Cardinals and relatives
Lazuli Bunting	*Passerina amoena*	Vagrant	X		
Indigo Bunting	*Passerina cyanea*	Vagrant	X		
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	Secure			
Passeriformes – Icteridae					Perching birds – Blackbirds and relatives
Red-winged Blackbird	*Agelaius phoeniceus*	Secure			
Rusty Blackbird	*Euphagus carolinus*	Sensitive		①[2]	Special Concern - 2006
Brewer's Blackbird	*Euphagus cyanocephalus*	Undetermined			
Baltimore Oriole	*Icterus galbula*	Vagrant	X		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Brown-headed Cowbird	*Molothrus ater*	Secure			
Common Grackle	*Quiscalus quiscula*	Secure	L		
Western Meadowlark	*Sturnella neglecta*	Vagrant	X		
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	Vagrant	X		
Passeriformes – Fringillidae					**Perching birds – Finches**
Common Redpoll	*Acanthis flammea*	Secure			
Hoary Redpoll	*Acanthis hornemanni*	Undetermined			
American Goldfinch	*Carduelis tristis*	Vagrant	X	#	
House Finch	*Carpodacus mexicanus*	Vagrant	X		
Purple Finch	*Carpodacus purpureus*	Secure			
Evening Grosbeak	*Coccothraustes vespertinus*	Secure	L		
Gray-crowned Rosy Finch	*Leucosticte tephrocotis*	Undetermined			
Red Crossbill	*Loxia curvirostra*	Secure			
White-winged Crossbill	*Loxia leucoptera*	Secure			
Pine Grosbeak	*Pinicola enucleator*	Secure			
Pine Siskin	*Spinus pinus*	Secure			
Passeriformes – Passeridae					**Perching birds – Old World Sparrows**
House Sparrow	*Passer domesticus*	Alien	X		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, II: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

1 Changed from At Risk

2 Changed from May Be At Risk

3 Changed from Sensitive

4 Changed from Secure

5 Changed from Undetermined

6 Changed from Not Assessed

7 Changed from Alien

8 Changed from Extirpated

9 Changed from Vagrant

6.4 Fishes

■ Arctic Grayling
Photo Credit:
P Vecsei

Fish are vertebrates, with gills, that live in water. Three major groups of fish are recognised: the jawless fishes (e.g., lampreys), the cartilaginous fishes (e.g., sharks and skates) and all the others, bony fishes (e.g., chars, whitefishes, and herring). Fish are excellent indicators of water quality and ecosystem health. The presence or absence of certain species can provide immediate clues about the conditions within a given area. Fish are one of the most important food and economic resources in the NWT. We are known for our trophy sized fish, for healthy populations, and for delicacies.

In 2010, we reviewed all ranks for freshwater species and updated the list of all marine fishes known to occur in the NWT's section of the Beaufort Sea and western Arctic Ocean. Recent work includes the following initiatives.

Diversity of Ciscoes and Lake Trout

Shortjaw cisco is thought to occur in Great Slave Lake and possibly in Great Bear Lake. Work to confirm this was initiated on Great Slave Lake. This work has so far uncovered substantive and previously unknown diversity of ciscoes in this large lake. Preliminary results suggest that a shortjaw cisco-like form occurs, a blackfin cisco-like form and at least three other forms of cisco also occur in one bay of this large lake. Other bays may hold similar or different forms. Future research is needed to determine if these ciscoes are distinct species, if they are in fact shortjaw or blackfin ciscoes, and how they are related both to each other and to ciscoes found elsewhere. Similar work is also being conducted in both lakes on diversity of lake trout, which appears to also exhibit different forms.

Salmon Collection Project

Fisheries and Oceans Canada (DFO) is collecting samples of salmon for research. The study aims to chart the occurrence of vagrant salmon and to ultimately relate the movement of salmon in the NWT to potential climatic changes in the Pacific Ocean and the western Arctic. DFO is working with local resources councils throughout the NWT to obtain as many samples as possible. Salmon can be turned in for rewards to local DFO offices, attention to Fisheries Management staff. Documenting any evidence of occurrence and possible colonisation of the western Arctic Ocean by vagrant species and ultimately relating this to climate change is a key part of the study. This will allow for a better understanding of how to manage new fisheries if they arise.

Research on Broad Whitefish

Broad whitefish is a key food fish of the lower Mackenzie River basin. Research includes work to understand the different forms present (lake-dwelling, river-dwelling, and sea-run or anadromous) and how these mix together when in fresh water. This work contributes to better understanding of fisheries and improves our management of whitefish.

Research on Burbot

Research is being conducted to better understand the ecology of this common but poorly understood species, which is important in many local fisheries. Focus of this research is on reproduction and the importance of sound to their mating behaviour, as well as understanding the role of burbot in food webs.

Research on Chars

Both bull trout and dolly varden occupy key habitats within the Mackenzie River basin, however, their distributions are poorly known. This project is mapping the distribution of bull trout in the context of other species of char, such as dolly varden, and is helping to ensure proper identification of this group of fish. Bull trout is presently being assessed by COSEWIC. Research on dolly varden in the NWT includes

studies of genetics, fluctuations in abundance, and habitat use. This work is linked to similar studies on this species on the North Slope of Yukon. Dolly varden (northern form) was recently assessed by COSEWIC as a species of special concern. One component of an International Polar Year project examining the effects of climate change on chars in the Canadian Arctic has focused on responses of lake-dwelling and sea-run chars to climate and habitat change in lakes and rivers near Sachs Harbour and Ulukhaktok. This work is ongoing, and early results suggest both forms of chars respond with greater growth. Additional work is being conducted regarding the effects of climate change on lake productivity needed to sustain such growth.

Research on Marine Fishes

The Northern Coastal Marine Studies program 2003 - 2009 was a multidisciplinary study aimed at characterizing the physical and biological nature of the Canadian Beaufort Sea Shelf.

Marine fish surveys were conducted from the CCGS Nahidik to study the composition and spatial distribution of fish relative to physical and chemical habitat parameters, and to contribute to the general biological and ecological information on offshore fish populations. Samples are contributing to follow up studies of trophic structure and energy transfer within the Beaufort Sea ecosystem, and to focused studies on the ecology of pivotal marine species such as Arctic Cod (*Boreogadus saida*). Recent research has shifted to areas adjacent to the Mackenzie River Delta. Together with a coastal fish study conducted on the Yukon North Slope, these studies are updating information on marine fish species in the NWT.

Neil Mochnacz, Andrew Majewski, Chantelle Sawatzky, Pete Cott, Jim Reist, Jim Johnson, Holly Cleator and Kathleen Martin

Fisheries and Oceans Canada

List 4. **Fishes**

A total of 92 species of fish can be found regularly in our rivers and lakes, and in the NWT's section of the Beaufort Sea and Arctic Ocean. An additional 5 species are vagrant and may be seen in the NWT irregularly, and an additional 16 species of marine fishes are expected to be present. Two species are of global conservation concern. Some species of fish are marine (M) and live exclusively in the ocean. Other species live exclusively in freshwater (F) or live in freshwater during at least one part of their life (A, anadromous). Some species have one freshwater form, and one marine or anadromous form. These life forms and habitat preferences are described in the Habitat Note column. The general status of these marine species will be ranked in the future. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows the standard from the American Fisheries Society (Nelson et al. 2004, Nelson 2006) and for marine fishes, follows Coad and Reist (2004).

Common Name	Scientific Species Name	Status Rank	Range/ Habitat Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Clupeiformes – Clupeidae					**Herring-like fishes – Herring**
Pacific Herring	*Clupea pallasii*	Not assessed	M		
Cypriniformes – Catostomidae					**Minnow-like fishes – Suckers**
Longnose Sucker	*Catostomus catostomus*	Secure	F		
White Sucker	*Catostomus commersonii*	Secure	F		
Cypriniformes – Cyprinidae					**Minnow-like fishes – Minnows and relatives**
Lake Chub	*Couesius plumbeus*	Secure	F	①[5]	
Pearl Dace	*Margariscus margarita*	Secure	L/F	①[7]	
Peamouth	*Mylocheilus caurinus*	Undetermined	F	①[8]	
Emerald Shiner	*Notropis atherinoides*	Secure	F	①[5]	
Spottail Shiner	*Notropis hudsonius*	Secure	F	①[5]	
Northern Redbelly Dace	*Phoxinus eos*	Secure	L/F	①[5]	

Common Name	Scientific Species Name	Status Rank	Range/ Habitat Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Finescale Dace	*Phoxinus neogaeus*	Secure	F	ⓘ[5]	
Fathead Minnow	*Pimephales promelas*	Undetermined	F		
Flathead Chub	*Platygobio gracilis*	Secure	F	ⓘ[5]	
Longnose Dace	*Rhinichthys cataractae*	Secure	F		
Esociformes – Esocidae					**Pike-like fishes – Pikes**
Northern Pike	*Esox lucius*	Secure	F		
Gadiformes – Gadidae					**Cod-like fishes – Cods**
Polar Cod	*Arctogadus glacialis*	Not assessed	M		
Arctic Cod	*Boreogadus saida*	Not assessed	M		
Saffron Cod	*Eleginus gracilis*	Not assessed	M		
Ogac (Greenland Cod)	*Gadus ogac*	Not assessed	M		
Burbot (Loche)	*Lota lota*	Secure	F		
Gasterosteiformes – Gasterosteidae					**Stickleback-like fishes – Sticklebacks**
Brook Stickleback	*Culaea inconstans*	Secure	F	ⓘ[3]	
Threespine Stickleback	*Gasterosteus aculeatus*	Secure	F,A,M	3[9]	
Ninespine Stickleback	*Pungitius pungitius*	Secure	F		
Osmeriformes – Osmeridae					**Smelt-like fishes – Smelts**
Pond Smelt	*Hypomesus olidus*	Undetermined	F		
Capelin	*Mallotus villosus*	Not assessed	M		
Rainbow Smelt	*Osmerus mordax*	Undetermined	L/ F,A		
Osteoglossiformes – Hiodontidae					**Bony-tongued fishes – Goldeyes**
Goldeye	*Hiodon alosoides*	Secure	F		
Perciformes – Ammodytidae					**Perch-like fishes – Sand lances**
Northern Sand Lance	*Ammodytes dubius*	Not assessed	M		
Pacific Sand Lance	*Ammodytes hexapterus*	Not assessed	M		
Perciformes – Anarhichadidae					**Perch-like fishes – Wolffishes**
Northern Wolffish	*Anarhichas denticulatus*	Undetermined	M		Threatened - 2001
Perciformes – Percidae					**Perch-like fishes – Perches and relatives**
Iowa Darter	*Etheostoma exile*	Presence Expected	F		
Yellow Perch	*Perca flavescens*	Undetermined	F		
Walleye ("Pickerel")	*Sander vitreus*	Sensitive	F		
Perciformes – Stichaeidae					**Perch-like fishes – Shannies and relatives**
Blackline Prickleback	*Acantholumpenus mackayi*	Undetermined	M		Data Deficient - 2003
Stout Eelblenny	*Anisarchus medius*	Not assessed	M		
Fourline Snakeblenny	*Eumesogrammus praecisus*	Not assessed	M		
Daubed Shanny	*Leptoclinus maculatus*	Not assessed	M		
Slender Eelblenny	*Lumpenus fabricii*	Not assessed	M		
Arctic Shanny	*Stichaeus punctatus*	Not assessed	M		

Common Name	Scientific Species Name	Status Rank	Range/ Habitat Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Perciformes – Zoarcidae					**Perch-like fishes – Eelpouts and relatives**
Halfbarred Pout	*Gymnelus hemifasciatus*	Not assessed	M		
Bigeye Unernak	*Gymnelus knipowitschi*	Presence Expected	M	3[6]	
Fish Doctor	*Gymnelus viridis*	Not assessed	M		
Shulupaoluk	*Lycodes jugoricus*	Not assessed	M		
White Sea Eelpout	*Lycodes marisalbi*	Presence Expected	M		
Saddled Eelpout	*Lycodes mucosus*	Not assessed	M		
Wattled Eelpout	*Lycodes palearis*	Presence Expected	M		
Polar Eelpout	*Lycodes polaris*	Not assessed	M		
Threespot Eelpout	*Lycodes rossi*	Not assessed	M		
Archer Eelpout	*Lycodes sagittarius*	Presence Expected	M		
Longear Eelpout	*Lycodes seminudus*	Not assessed	M		
Scalebelly Eelpout	*Lycodes squamiventer*	Presence Expected	M		
Turner Eelpout	*Lycodes turneri*	Presence Expected	M		
Percopsiformes – Percopsidae					**Trout-perches – Trout-perches**
Trout-Perch	*Percopsis omiscomaycus*	Secure	F	3[5]	
Petromyzontiformes – Petromyzontidae					**Lampreys – Lampreys**
American Brook Lamprey [d]	*Lampetra appendix*	Undetermined	F		Data Deficient – 1990/ G3Q - 2008
Arctic Lamprey	*Lampetra camtschaticha*	Undetermined	F		
Pleuronectiformes – Pleuronectidae					**Flatfishes – Flounders and relatives**
Bering Flounder	*Hippoglossoides robustus*	Not assessed	M		
Starry Flounder	*Platichthys stellatus*	Not assessed	M		
Arctic Flounder	*Pleuronectes glacialis*	Not assessed	M		
Alaska Plaice	*Pleuronectes quadrituberculatus*	Presence Expected	M		
Greenland Halibut	*Reinhardtius hippoglossoides*	Not assessed	M		
Rajiformes – Rajidae					**Ray-like fishes – Skates**
Arctic Skate	*Amblyraja hyperborea*	Not assessed	M		
Salmoniformes – Salmonidae					**Salmon-like fishes – Salmons and relatives**
Cisco (Lake Herring, Lake Cisco)	*Coregonus artedi*	Secure	F,A		
Arctic Cisco	*Coregonus autumnalis*	Sensitive	F,A		
Lake Whitefish [e]	*Coregonus clupeaformis*	Secure	F,A		
Bering Cisco	*Coregonus laurettae*	Presence Expected	F,A	3[6]	
Broad Whitefish	*Coregonus nasus*	Secure	F,A		
Humpback Whitefish [e]	*Coregonus pidschian*	Undetermined	F		
Least Cisco	*Coregonus sardinella*	Secure	F,A		
Shortjaw Cisco	*Coregonus zenithicus*	At Risk	F		Threatened – 2003/ G3 - 2007
Pink Salmon	*Oncorhynchus gorbuscha*	Vagrant	X/A		

Common Name	Scientific Species Name	Status Rank	Range/ Habitat Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Chum Salmon	*Oncorhynchus keta*	Undetermined	A		
Coho Salmon	*Oncorhynchus kisutch*	Vagrant	X/A		
Rainbow Trout	*Oncorhynchus mykiss*	Alien	X, F		
Sockeye Salmon/ Kokanee	*Oncorhynchus nerka*	Vagrant	X/F,A		
Chinook Salmon	*Oncorhynchus tshawytscha*	Vagrant	X/A		
Pygmy Whitefish	*Prosopium coulterii*	Undetermined	F		
Round Whitefish	*Prosopium cylindraceum*	Secure	F,A		
Mountain Whitefish	*Prosopium williamsoni*	Secure	F,A	∃[6]	
Arctic Char [h]	*Salvelinus alpinus*	Secure	F,A		
Brook Trout	*Salvelinus fontinalis* [i]	Alien	F	∃[6]	
Bull Trout	*Salvelinus confluentus*	May Be At Risk	F		
Dolly Varden	*Salvelinus malma*	Sensitive	L/F,A		Special Concern - 2010
Lake Trout	*Salvelinus namaycush*	Secure	F		
Inconnu (Coney) [f]	*Stenodus leucichthys*	Sensitive	F,A		
Arctic Grayling	*Thymallus arcticus*	Sensitive	F		
Scorpaeniformes – Agonidae			**Sculpin-like fishes – Alligatorfishes and poachers**		
Atlantic Poacher	*Leptagonus decagonus*	Not assessed	M		
Veteran Poacher	*Podothecus veternus*	Presence Expected	M		
Arctic Alligatorfish	*Ulcina olrikii*	Not assessed	M		
Scorpaeniformes – Cottidae			**Sculpin-like fishes – Scaleless sculpins**		
Spinyhook Sculpin	*Artediellus gomojunovi*	Presence Expected	M		
Hamecon	*Artediellus scaber*	Not assessed	M		
Arctic Hookear Sculpin	*Artediellus uncinatus*	Not assessed	M		
Slimy Sculpin	*Cottus cognatus*	Secure	F	ⓘ[5]	
Spoonhead Sculpin	*Cottus ricei*	Secure	F	ⓘ[5]	Not at Risk - 1989
Antlered Sculpin	*Enophrys diceraus*	Presence Expected	M		
Arctic Staghorn Sculpin	*Gymnocanthus tricuspis*	Not assessed	M		
Twohorn Sculpin	*Icelus bicornis*	Not assessed	M		
Spatulate Sculpin	*Icelus spatula*	Not assessed	M		
Belligerent Sculpin	*Megalocottus platycephalus*	Presence Expected	M		
Plain Sculpin	*Myoxocephalus jaok*	Presence Expected	M		
Fourhorn Sculpin [g]	*Myoxocephalus quadricornis*	Undetermined	F, M		Landlocked freshwater form: Data Deficient - 2003; Marine form: Not at Risk - 2003
Arctic Sculpin	*Myoxocephalus scorpioides*	Not assessed	M		
Shorthorn Sculpin	*Myoxocephalus scorpius*	Not assessed	M		
Deepwater Sculpin	*Myoxocephalus thompsonii*	Sensitive	F		
Bigeye Sculpin	*Triglops nybelini*	Not assessed	M		
Ribbed Sculpin	*Triglops pingelii*	Not assessed	M		

Common Name	Scientific Species Name	Status Rank	Range/ Habitat Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Scorpaeniformes – Cyclopteridae					**Sculpin-like fishes – Lumpsuckers**
Pimpled Lumpsucker	*Eumicrotremus andriashevi*	Presence Expected	M		
Leathernfin Lumpsucker	*Eumicrotremus derjugini*	Not assessed	M		
Atlantic Spiny Lumpsucker	*Eumicrotremus spinosus*	Not assessed	M		
Scorpaeniformes – Hexagrammidae					**Sculpin-like fishes – Greenlings**
Whitespotted Greenling	*Hexagrammos stelleri*	Presence Expected	M		
Scorpaeniformes – Liparidae					**Sculpin-like fishes – Snailfishes**
Sea Tadpole	*Careproctus reinhardti*	Not assessed	M		
Gelatinous Seasnail	*Liparis fabricii*	Not assessed	M		
Variegate Snailfish	*Liparis gibbus*	Not assessed	M		
Kelp Snailfish	*Liparis tunicatus*	Not assessed	M		
Scorpaeniformes – Psychrolutidae					**Sculpin-like fishes – Flathead sculpins**
Sadko Sculpin	*Cottunculus sadko*	Presence Expected	M		
Squaliformes – Dalatiidae					**Dogfish sharks – Sleeper sharks**
Pacific Sleeper Shark	*Somniosus pacificus*	Presence Expected	M		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT. Habitat Note: F = Species (form) lives exclusively in freshwater. A = Species (form) lives in both marine and freshwater. M = Species (form) lives in marine water exclusively.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, ♯: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, ΠI: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Q: Taxonomy complex and unresolved. Definitions and more information can be found at www.natureserve.org.

d The taxon American Brook Lamprey (*Lampetra appendix*) in the NWT(and Alaska) is considered a species of global concern (G3Q) under the name Alaska Brook Lamprey (*Lampetra alaskensis*). The taxonomy of this taxon is under review.

e General Status Ranks are given for both Lake and Humpback Whitefish as taxonomically distinct species: *Coregonus clupeaformis*, *C. pidschian*. However, these species cannot easily be distinguished using standard morphometric methods. The relative distribution of each species in the NWT is still unclear.

f General Status Rank is given for the whole species Inconnu (*Stenodus leucichthys*), but one stock, in the Upper Mackenzie River and Great Slave Lake system is given a Rank of "May Be At Risk".

g Fourhorn Sculpin (*Myoxocephalus quadricornis*) is a marine species, but a lake form exists in some Arctic islands of NWT (and Nunavut). The Rank is given for the whole species.

h General Status is given for the whole species Arctic Char (*Salvelinus alpinus*), but two stocks, in the Hornaday River and the Kuujjua River, were given a Rank of "Sensitive".

i Brook Trout (*Salvelinus fontinalus*) was stocked in 3 locations in the NWT prior to the 1970s. It is uncertain if they have formed surviving populations.

1 Changed from At Risk
2 Changed from May Be At Risk
3 Changed from Sensitive
4 Changed from Secure
5 Changed from Undetermined
6 Changed from Not Assessed
7 Changed from Alien
8 Changed from Extirpated
9 Changed from Vagrant
10 Changed from Presence Expected

6.5 Freshwater Mussels

■ Giant Floater shells at Shell Lake
Photo Credit: M Gravel/GNWT

Only two species of freshwater mussels are found in the NWT: the fat mucket and the giant floater. The status ranks of these two species have not changed since 2006.

Molluscs (*Phylum* Mollusca) are invertebrates with a soft or hard shell, a mantle (fold of skin), and a muscular foot that they use to move around. Molluscs are of various shapes and include snails, clams, mussels, octopus, and squids. Some molluscs are terrestrial but most are aquatic; all require a humid environment.

Mussels are a part of a group of molluscs belonging to the *Class* Bivalvia. Bivalves have two "valves" of similar shape facing each other, forming a two-part shell. All bivalves are strictly aquatic. The *Order* Unionoida are bivalves found only in freshwater and are often called freshwater mussels.

Mussels feed by filtering water to find and ingest plankton. Mussels use their foot to anchor or half bury themselves at the bottom of water bodies. Mussels often live together in a group. Because they filter large quantities of water and spend a large portion of their life in one area, mussels are excellent indicators of aquatic ecosystem quality. The sudden disappearance or a decline in growth rate of a species of freshwater mussel is regarded as an indication of a decreasing aquatic ecosystem health. Mussels are also food for muskrats, river otters, and humans among others.

Mussel eggs develop into larva (called "glochidia") that grow attached to the gills of a female adult mussel. Some species of mussels produce parasitic glochidia that attach to the gills or fins of fish. The larva of some mussels are species-specific, and can live only if they attach to the appropriate host fish species. All larva eventually detach themselves and, if they fall in suitable habitat, will develop into adult mussels.

The fat mucket has 14 known host fish species, including yellow perch and walleye. It is found in southern NWT where it is considered abundant. The giant floater may be found across the NWT, but its host fish is unknown and there is no information on numbers or population health. The best-known and most studied population of giant floater can be found at the aptly named Shell Lake, near Inuvik.

Becky Cudmore
Department of Fisheries and Oceans

List 5. Freshwater Mussels

There are two species of freshwater mussels in the NWT. None are of global conservation concern. Species are listed according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows NatureServe (2010).

■ Giant Floater Photo Credit: R Stewart/USGS

Common Name	Scientific Species Name	Status Rank	Range Note [a]	Reason for Change [b]	COSEWIC Status/Global Conservation Concern [c]
Unfonoida – Unfonidae					Mussels – Freshwater Mussels
Fat Mucket	*Lampsilis siliquoidea*	Secure			
Giant Floater	*Pyganodon grandis*	Undetermined			

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, II: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

6.6 Amphibians and Reptiles

■ Boreal Chorus Frog
Photo Credit: A Franklin

Amphibians and reptiles are mostly found in the forested areas of the NWT, although the hardy wood frog can be seen just north of the tree line. Most amphibians that occur in the NWT, and the Red-sided Garter Snake, are at their northern limit in the NWT.

Globally, amphibians are declining at rates that are unparalleled among other vertebrates. The main threats to amphibians elsewhere in Canada are habitat loss and pollution. Other threats include droughts, increased UV exposure due to ozone depletion, and increased frequency of diseases.

Two pathogens that are implicated in amphibian declines elsewhere around the world have been detected in amphibian populations in the NWT. Batrachochytrium dendrobatidis (Bd), a fungus, has been linked to population declines and even extinctions of frogs around the world. This pathogen was detected in the Dehcho during amphibian health studies in 2007 and 2008. Bd was detected in wood frogs, boreal toads, and boreal chorus frogs near Fort Liard. During these same studies, which included sites as far north as the Sahtu, ranaviruses were also detected in wood frogs. This viral disease is also linked with amphibian declines but its long-term effects are not well understood. Ranaviruses also were detected in wood frogs in the South Slave in 2009 and 2010.

None of the diseases detected in amphibians are transmittable to humans. Climate change is predicted to affect the transmission of many diseases, including those which affect amphibians. Amphibian lifecycles are tightly linked with temperature and humidity and so too are the lifecycles of Bd and ranviruses. Humans may also be part of the problem of pathogens being spread from pond to pond when people collect frogs and toads or visit ponds without first washing boots and other gear.

During the South Slave, high numbers of malformed frogs, such as missing eyes, abnormal legs, and abnormal spines, were detected. The causes of these malformations are still unclear, but may include predation attempts, pollution, genetic diseases, or some other unknown cause.

Our understanding of amphibian and reptiles is increasing. All can help in monitoring amphibians and reptiles by reporting observations using a pamphlet available at your nearest ENR office or on the **www.enr.gov.nt.ca**, web site.

Dr. Danna Schock
Keyano College, Fort McMurray

Dr. Suzanne Carrière and Mike Fournier
Canadian Amphibian and Reptile
Conservation Network
Northwest Territories Co-ordinators

List 6. Amphibians and Reptiles

Five species of amphibians and one species of reptile are confirmed to occur in the NWT. No species of amphibians and reptiles are of global conservation concern. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Crother (2008).

■ Common Red-sided Garter Snake Photo Credit: M Oldham

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Anura – Bufonidae					**Frog-like amphibians – Toads**
Western Toad	*Anaxyrus boreas*	May Be At Risk	L		Special Concern - 2002
Canadian Toad	*Anaxyrus hemiophrys*	Sensitive	L	ⓘ[2]	Not at Risk - 2003
Anura – Hylidae					**Frog-like amphibians – Tree Frogs**
Boreal Chorus Frog	*Pseudacris maculata*	Secure			
Anura – Ranidae					**Frog-like amphibians – True Frogs**
Northern Leopard Frog	*Lithobates pipiens*	May Be At Risk	L	ⓘ[3]	Special Concern - 2009
Wood Frog	*Lithobates sylvatica*	Secure			
Caudata – Ambystomidae					**Salamander-like amphibians – Salamanders**
Long-Toed Salamander	*Ambystoma macrodactylum*	Presence Expected			Not at Risk - 2006
Serpentes – Colubridae					**Serpent-like reptiles – Garter Snakes**
Terrestrial Garter Snake	*Thamnophis elegans*	Presence Expected			
Common Red-sided Garter Snake	*Thamnophis sirtalis*	May Be At Risk	L		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, Ξ: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, ΠΙ: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

1 Changed from At Risk
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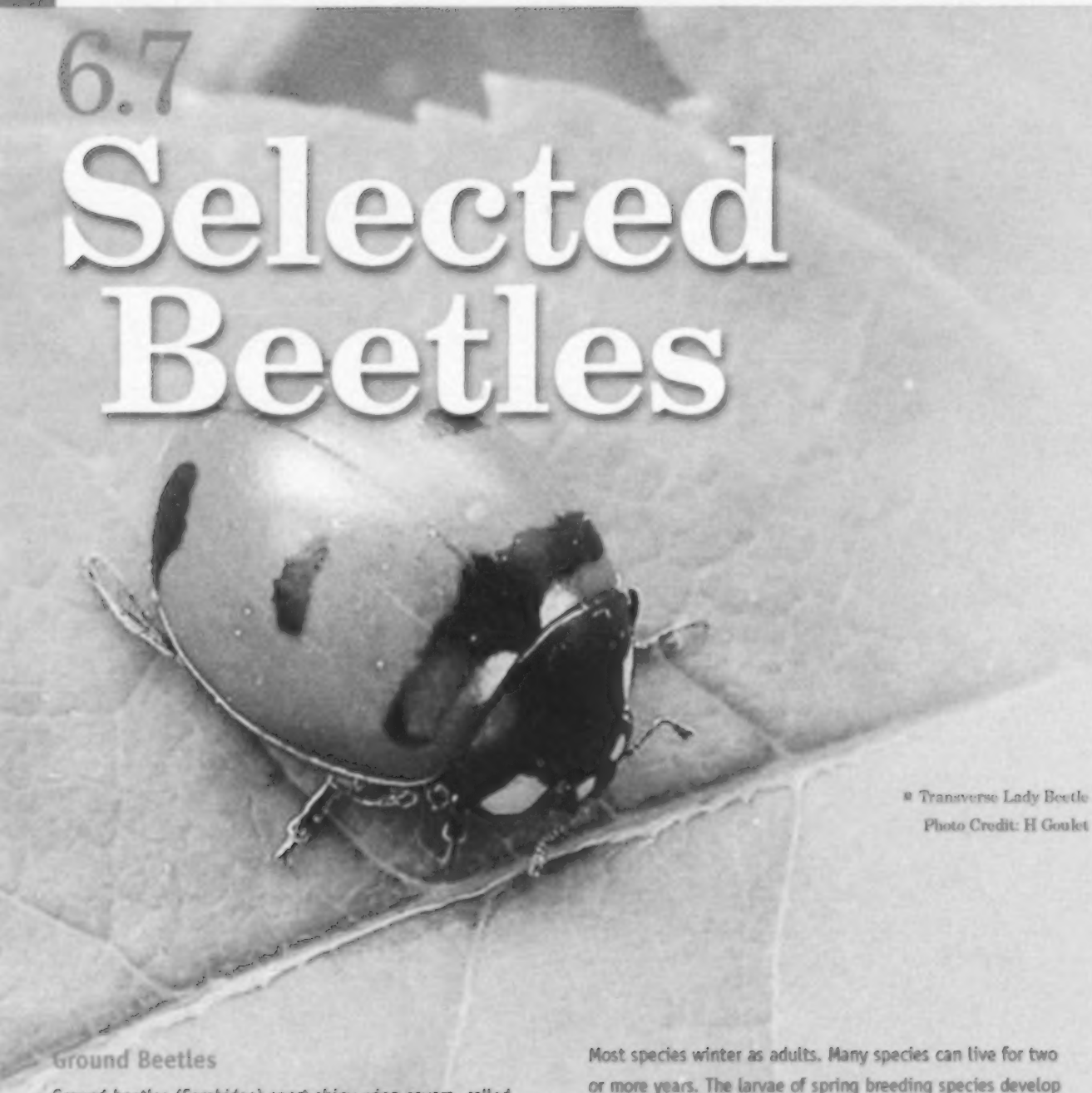
6.7 Selected Beetles



Transverse Lady Beetle
Photo Credit: H Goulet

Ground Beetles

Ground beetles (Carabidae) sport shiny wing covers, called elytra, which can be quite colourful. Most species are carnivorous, hunting other invertebrates at night, except for tiger beetles (*Cicindela* sp.), some species of *Bembidion* and *Lebia viridis*, which are day active. They are all very good runners. Their preferred hunting grounds include sand dunes, beaches, fields, open soil surfaces, forest litter, marshes or bogs, creek and river edges, and some even hunt on snow fields at night (some *Nebria*) or on plants (some *Lebia*). In daytime, adults of most species will rest under tree bark, logs and rocks, in sand or under debris around ponds and near rivers.

Most species winter as adults. Many species can live for two or more years. The larvae of spring breeding species develop rapidly, in 3 to 4 weeks. Summer breeding species (only found in the southern regions in the NWT) winter as larvae.

There are 218 known species of ground beetles in the NWT, including 6 species of tiger beetles, which were ranked in 2006. None of these ranks have changed for 2011. Little is known on the biological status of beetles in the NWT, so most species have been ranked as "Undetermined". The only ground beetle species ranked as "May Be At Risk" for the NWT is salt-march elaphrus beetle (*Elaphrus lecontei*). It is restricted

in the NWT to salt plains habitat in Wood Buffalo National Park. The populations in the Park appear different from all southern populations, and need further study to determine if these differences are of biodiversity conservation significance.

Lady Beetles

The elytra of lady beetles (Coccinellidae), also called ladybird or ladybug, may be a colourful yellow, orange, or red with black spots, or may be black or grey. The rest of the beetle is black. The colourful back is a warning to predators: "do not eat me, I taste bad". Most species overwinter as adults, and then lay eggs in spring. Eggs hatch shortly and the larvae go through a number of instars, and then pupate. The new adults may reproduce right away or overwinter and reproduce the next spring.

Some species of lady beetles are considered pests, but as most of them are predatory, they may be useful as control agents on garden and flower plants, preying on pests such as aphids. Some lady beetles have been successfully introduced in North America for pest control purposes, however some of these species are now of concern as they are displacing native species. None of the introduced lady beetles, such as *Harmonia axyridis* or *Coccinella septempunctata*, have been recorded in the wild in the NWT.

The NWT is home to 27 known species of lady beetles. Very little is known about their distribution, populations or potential threats, so most of them are ranked as "Undetermined".

Predaceous Diving Beetles

Predaceous diving beetles (Dytiscidae) range in size from 2 to 30 mm. Their hind legs are superbly adapted for swimming. Adults carry air under their wing covers and come to the surface to replenish with fresh air. Adults commonly fly from wet places to wet places. Flying adults recognize water by the polarized light it reflects. Most species are brown or black, but some have yellow patterns on their wing covers. Adults and larva of most species search, attack and eat other aquatic insects (e.g., mosquito larvae) and even tadpoles. Some species will also scavenge. Adults and larvae usually live in the water. Mature larvae will crawl out of the water and make a pupal cell below a firm organic slab, wood or sometimes rock. The adults soon emerge. Overwintering occurs as adult and larvae. Adults of many species overwinter in drained litter not far from wet habitats. Reproduction occurs only once in one year (univoltine), or once in a few years (semivoltine).

So far 122 species of predaceous diving beetles are known to occur in the NWT. They may be found in any shallow water with some vegetation on the edges, but some of our species are cold specialists, living in northern springs, streams, and pools in alpine and arctic habitats. Others prefer saline ponds.

Surveying for Beetles in the NWT

Beetles are marvellous to study. They are easy to identify. They do not sting. They are easy to pick up as few would bother to fly away. However, tiger beetles and some *Bembidion* are excellent flyers and catching them without a net requires cunning and dexterity. Above all, they are amazingly diverse, occurring in the North from tundra to the boreal forest. There is an estimated 2,300 species in the NWT.

Most of our knowledge of beetles is from along the Mackenzie River at communities. There is still much to discover and people of the NWT are certainly up to the challenge.

To study beetles one must take pictures or collect specimens. Take only a few at each location. Specimens must be labelled properly, with lat-long, date, place name and habitat, and then they can be sent to the Canadian National Collection of Insects, Arachnids and Nematodes in Ottawa (K. W. Neatby Building, 960 Carling Avenue, Ottawa, ON K1A 0C6).

Dr. Henri Goulet
Agriculture and Agri-food Canada

▪ Western Tiger Beetle
Photo Credit: P Catling

List 7. Selected Beetles

There are 218 species of ground beetles, 27 species of lady beetles, and 122 species of predaceous diving beetle confirmed present in the NWT. None of the beetle species ranked in this report are of global conservation concern. Species are listed alphabetically according to scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Goulet and Bousquet (2004) for ground beetles, McCorquodale, D. (2010. pers comm.) for lady beetles, and Larson et al. (2000) for predaceous diving beetles. Common names are original for this document and have not been approved by the Entomological Society of Canada.

■ Common Claybank Tiger Beetle
Photo Credit: P Catling

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Coleoptera – Carabidae					Beetles – Ground Beetles
Svelte Ground Beetle	*Agonum affine*	Undetermined			
Beige Ground Beetle	*Agonum anchomenoides*	Undetermined			
Two-coloured Ground Beetle	*Agonum bicolor*	Undetermined			
Consimile Ground Beetle	*Agonum consimile*	Undetermined			
Cypress Ground Beetle	*Agonum cupreum*	Undetermined			
Elegant Purple-green Agonum Beetle	*Agonum cupripenne*	Undetermined			
Painted Ground Beetle	*Agonum exaratum*	Secure			
Gracious Ground Beetle	*Agonum gratiosum*	Undetermined			
Brown-prothorax Ground Beetle	*Agonum lutulentum*	Undetermined			
Metallic Ground Beetle	*Agonum metallescens*	Undetermined			
Variable Ground Beetle	*Agonum mutatum*	Undetermined			
Black-shanked Ground Beetle	*Agonum nigriceps*	Undetermined			
Close Ground Beetle	*Agonum propinquum*	Undetermined			
Five-spotted Ground Beetle	*Agonum quinquepunctatum*	Undetermined			
Forest-litter Ground Beetle	*Agonum retractum*	Undetermined			
Sordens Ground Beetle	*Agonum sordens*	Undetermined			
Superior Ground Beetle	*Agonum superioris*	Undetermined			
Thorey's Ground Beetle	*Agonum thoreyi*	Secure			
Aeneopolita Sun Beetle	*Amara aeneopolita*	Undetermined			
Alpine Sun Beetle	*Amara alpina*	Secure			
Bokor's Sun Beetle	*Amara bokori*	Secure			
Brown's Sun Beetle	*Amara browni*	Undetermined			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Copper Sun Beetle	*Amara brunnea*	Undetermined			
Daurian Sun Beetle	*Amara daurica*	Undetermined			
Erratic Sun Beetle	*Amara erratica*	Undetermined			
Gibb Sun Beetle	*Amara gibba*	Undetermined			
Glacier Sun Beetle	*Amara glacialis*	Undetermined			
Hicks' Sun Beetle	*Amara hicksi*	Undetermined			
Taiga Sun Beetle	*Amara hyperborea*	Undetermined			
Idaho Sun Beetle	*Amara idahoana*	Undetermined			
Interstitialis Sun Beetle	*Amara interstitialis*	Undetermined			
Kumakow's Sun Beetle	*Amara kurnakowi*	Undetermined			
Lake-loving Sun Beetle	*Amara lacustris*	Undetermined			
Smooth-winged Sun Beetle	*Amara laevipennis*	Undetermined			
Shore-lover Sun Beetle	*Amara littoralis*	Undetermined			
Moon-collar Sun Beetle	*Amara lunicollis*	Undetermined			
Large Sun Beetle	*Amara obesa*	Undetermined			
Pale-footed Sun Beetle	*Amara pallipes*	Undetermined			
Neighbouring Sun Beetle	*Amara patruelis*	Undetermined			
Brass Ground Beetle	*Amara pseudobrunnea*	Undetermined			
Quensel's Ground Beetle	*Amara quenseli*	Undetermined			
Schwarz's Ground Beetle	*Amara schwarzi*	Undetermined			
Marked Ground Beetle	*Amara sinuosa*	Undetermined			
Spurred Ground Beetle	*Amara spuria*	Undetermined			
Tough Ground Beetle	*Amara tenax*	Undetermined			
Torrid Ground Beetle	*Amara torrida*	Undetermined			
Beringian Ground Beetle	*Amara transberingiensis*	Undetermined			
Alaska Ground Beetle	*Asaphidion alaskanum*	Secure			
Red-black Spotted Beetle	*Badister neopulchellus*	Undetermined			
Short Spotted Beetle	*Badister obtusus*	Undetermined			
Sharp-nosed Bembidion Beetle	*Bembidion acutifrons*	Undetermined			
Bimarked Bembidion Beetle	*Bembidion bimaculatum*	Undetermined			
Brachythorax Bembidion Beetle	*Bembidion brachythorax*	Undetermined			
Canadian Bembidion Beetle	*Bembidion canadianum*	Undetermined			
Sand-loving Bembidion Beetle	*Bembidion carinula*	Undetermined			
Brass Bembidion Beetle	*Bembidion chalceum*	Undetermined			
Colorado Bembidion Beetle	*Bembidion coloradense*	Undetermined			
Compressed Bembidion Beetle	*Bembidion compressum*	Undetermined			
Two-coloured Bembidion Beetle	*Bembidion concolor*	Undetermined			
Concrete Bembidion Beetle	*Bembidion concretum*	Undetermined			
Short Bembidion Beetle	*Bembidion curtulatum*	Undetermined			

6.7 Selected Beetles

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Dauricum Bembidion Beetle	*Bembidion dauricum*	Undetermined			
Fortestria Bembidion Beetle	*Bembidion fortestriatum*	Undetermined			
Pitted Bembidion Beetle	*Bembidion foveum*	Undetermined			
Marked Bembidion Beetle	*Bembidion graphicum*	Undetermined			
Grap's Bembidion Beetle	*Bembidion grapii*	Secure			
Hast's Bembidion Beetle	*Bembidion hastii*	Undetermined			
Taiga Bembidion Beetle	*Bembidion hyperboraeorum*	Undetermined			
Longer Bembidion Beetle	*Bembidion incrematum*	Undetermined			
Salt Bembidion Beetle	*Bembidion insulatum*	Undetermined			
Bling Bembidion Beetle	*Bembidion interventor*	Undetermined			
Lapland Bembidion Beetle	*Bembidion lapponicum*	Undetermined			
Dawson Bembidion Beetle	*Bembidion lenae*	Undetermined			
Sandy-beach Bembidion Beetle	*Bembidion levettei*	Undetermined			
Manning Bembidion Beetle	*Bembidion manningense*	Undetermined			
Mulberry Bembidion Beetle	*Bembidion morulum*	Undetermined			
Changing Bembidion Beetle	*Bembidion mutatum*	Undetermined			
Black Bembidion Beetle	*Bembidion nigripes*	Secure			
Brillant Bembidion Beetle	*Bembidion nitidum*	Undetermined			
Dry-field Bembidion Beetle	*Bembidion obscurellum*	Undetermined			
Clay-beach Bemdidion Beetle	*Bembidion patruele*	Undetermined			
Oily Bembidion Beetle	*Bembidion petrosum*	Undetermined			
Flat Bembidion Beetle	*Bembidion planatum*	Undetermined			
Pseudocautum Bembidion Beetle	*Bembidion pseudocautum*	Undetermined			
Dotted-lined Bembidion Beetle	*Bembidion punctatostriatum*	Undetermined			
Graden Bembidion Beetle	*Bembidion quadrimaculatum*	Undetermined			
Field Bembidion Beetle	*Bembidion rupicola*	Undetermined			
Salebratum Bembidon Beetle	*Bembidion salebratum*	Undetermined			
Two-spotted Bembidion Beetle	*Bembidion scopulinum*	Undetermined			
Saline Bembidion Beetle	*Bembidion sejunctum*	Undetermined			
Semipunctuated Bembidon Beetle	*Bembidion semipunctatum*	Undetermined			
Dark Bembidion Beetle	*Bembidion sordidum*	Undetermined			
Grooved Bembidion Beetle	*Bembidion sulcipenne*	Undetermined			
Timid Bembidion Beetle	*Bembidion timidum*	Undetermined			
Transparent Bembidion Beetle	*Bembidion transparens*	Undetermined			
Rocky-creek Bembidion Beete	*Bembidion transversale*	Undetermined			
Shadow Bembidion Beetle	*Bembidion umbratum*	Undetermined			
Multicolour Bembidion Beetle	*Bembidion versicolor*	Undetermined			
Viridicolle Bembidion Beetle	*Bembidion viridicolle*	Undetermined			
Yukon Bembidion Beetle	*Bembidion yukonum*	Undetermined			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Chain-link Blethisa Beetle	*Blethisa catenaria*	Undetermined			
Marsh Blethisa Beetle	*Blethisa hudsonica*	Undetermined			
Bog Blethisa Beetle	*Blethisa julii*	Undetermined			
Many-spotted Blethisa Beetle	*Blethisa multipunctata*	Undetermined			
Large Blethisa Beetle	*Blethisa quadricollis*	Undetermined	L		
Leconte's Ground Beetle	*Bradycellus lecontei*	Undetermined			
Basket Ground Beetle	*Calathus ingratus*	Undetermined			
Chamisson Ground Beetle	*Carabus chamissonis*	Undetermined			
Meander Ground Beetle	*Carabus maeander*	Undetermined			
Gravel Ground Beetle	*Carabus taedatus*	Undetermined			
Short-necked Ground Beetle	*Carabus truncaticollis*	Undetermined			
Vietinghoff's Ground Beetle	*Carabus vietinghoffii*	Secure			
Dark-copper Stinking Beetle	*Chlaenius alternatus*	Undetermined			
Small-green Stinking Beetle	*Chlaenius lithophilus*	Undetermined			
Black Stinking Beetle	*Chlaenius niger*	Undetermined			
Prairie Stinking Beetle	*Chlaenius purpuricollis*	Undetermined			
Twelve-Spotted Tiger Beetle	*Cicindela duodecimguttata*[d]	Secure	L		
Common Claybank Tiger Beetle	*Cicindela limbalis*	Secure			
Sandy Tiger Beetle	*Cicindela limbata*	Sensitive	L		
Boreal Long-lipped Tiger Beetle	*Cicindela longilabris*	Secure			
Western Tiger Beetle	*Cicindela oregona*[d]	Secure	L		
Oblique-lined Tiger Beetle	*Cicindela tranquebarica*	Secure	L		
Sand Cymindis Beetle	*Cymindis cribricollis*	Undetermined			
Flat Cymindis Beetle	*Cymindis planipennis*	Undetermined			
Tundra Cymindis Beetle	*Cymindis unicolor*	Undetermined			
Richardson Mountain Cymindis Beetle	*Cymindis vaporariorum*	Undetermined			
Cold-seep Ground Beetle	*Diacheila arctica*	Undetermined			
Moss-loving Ground Beetle	*Diacheila polita*	Undetermined			
Range Ground Beetle	*Dicheirotrichus cognatus*	Secure			
Mannerheim's Ground Beetle	*Dicheirotrichus mannerheimii*	Undetermined			
Blunt Ground Beetle	*Diplocheila obtusa*	Undetermined			
Striped Ground Beetle	*Diplocheila striatopunctata*	Undetermined			
Aterrimus Ground Beetle	*Diplous aterrimus*	Undetermined			
Golden-green Ground Beetle	*Dyschirius aeneolus*	Undetermined			
Dejean's Ground Beetle	*Dyschirius dejeanii*	Undetermined			
Winter Ground Beetle	*Dyschirius hiematis*	Undetermined			
Melancholic Ground Beetle	*Dyschirius melancholicus*	Undetermined			
Polite Ground Beetle	*Dyschirius politus*	Undetermined			

6.7 Selected Beetles

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Subarctic Ground Beetle	*Dyschirius subarcticus*	Undetermined			
Truncated Ground Beetle	*Dyschirius truncatus*	Undetermined			
Anceps Ground Beetle	*Elaphropus anceps*	Undetermined			
Boreal Elaphrus Beetle	*Elaphrus americanus*	Secure			
Invisible Elaphrus Beetle	*Elaphrus angusticollis*	Undetermined			
Clay-loving Elaphrus Beetle	*Elaphrus californicus*	Undetermined			
Cairville's Elaphrus Beetle	*Elaphrus clairvillei*	Secure			
Lapland Elaphrus Beetle	*Elaphrus lapponicus*	Secure			
Salt-marsh Elaphrus Beetle	*Elaphrus lecontei*	May Be At Risk	L		
Olive Elaphrus Beetle	*Elaphrus olivaceus*	Sensitive	L		
Mountain-creek Elaphrus Beetle	*Elaphrus purpurans*	Undetermined			
Tundra Elaphrus Beetle	*Elaphrus trossulus*	Undetermined			
Subarctic-river Elaphrus Beetle	*Elaphrus tuberculatus*	Secure			
Small Olympic Beetle	*Gehringia olympica*	Undetermined			
Blowout Ground Beetle	*Harpalobrachys leiroides*	Undetermined			
Lame Harpalus Beetle	*Harpalus amputatus*	Undetermined			
Fulvia Harpalus Beetle	*Harpalus fulvilabris*	Undetermined			
Brown Harpalus Beetle	*Harpalus fuscipalpis*	Undetermined			
Inoffensive Harpalus Beetle	*Harpalus innocuus*	Undetermined			
Left-footed Harpalus Beetle	*Harpalus laevipes*	Undetermined			
Large-headed Harpalus Beetle	*Harpalus laticeps*	Undetermined			
Lewis' Harpalus Beetle	*Harpalus lewisii*	Undetermined			
Black-legged Harpalus Beetle	*Harpalus nigritarsis*	Undetermined			
Opaque Harpalus Beetle	*Harpalus opacipennis*	Undetermined			
Plenalis Harpalus Beetle	*Harpalus plenalis*	Undetermined			
Solitary Harpalus Beetle	*Harpalus solitaris*	Undetermined			
Field Harpalus Beetle	*Harpalus somnulentus*	Undetermined			
Flower Lebia Beetle	*Lebia viridis*	Undetermined			
Litter Loricera Beetle	*Loricera pilicornis*	Undetermined			
Arctic Smooth Beetle	*Miscodera arctica*	Undetermined			
Northern Nebria Beetle	*Nebria frigida*	Undetermined			
Gyllenhal's Nebria Beetle	*Nebria gyllenhali*	Undetermined			
Hudson Nebria Beetle	*Nebria hudsonica*	Undetermined			
Snow Nebria Beetle	*Nebria nivalis*	Undetermined			
Oblique Nebria Beetle	*Nebria obliqua*	Undetermined			
Sahlberg's Nebria Beetle	*Nebria sahlbergii*	Undetermined			
Aquatic Curious Beetle	*Notiophilus aquaticus*	Undetermined			
Boreal Curious Beetle	*Notiophilus borealis*	Undetermined			
Ocellate Creek Beetle	*Opisthius richardsoni*	Undetermined			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Pitted Patrobus Beetle	*Patrobus foveocollis*	Undetermined			
Long-horned Patrobus Beetle	*Patrobus longicornis*	Undetermined			
Northern Patrobus Beetle	*Patrobus septentrionis*	Undetermined			
Marked Patrobus Beetle	*Patrobus stygicus*	Undetermined			
Boreal Marsh Beetle	*Pelophila borealis*	Secure			
Tussock Marsh Beetle	*Pelophila rudis*	Undetermined			
Proper Platynus Beetle	*Platynus decens*	Undetermined			
Mannerheim's Platynus Beetle	*Platynus mannerheimii*	Undetermined			
Lake Beaver Beetle	*Platypatrobus lacustris*	Undetermined			
Gardener Ground Beetle	*Poecilus lucublandus*	Undetermined			
Russian Ground Beetle	*Poecilus nearcticus*	Undetermined			
Pitted Ground Beetle	*Pterostichus adstrictus*	Secure			
Agonus Ground Beetle	*Pterostichus agonus*	Undetermined			
Arctic Ground Bettle	*Pterostichus arcticola*	Undetermined			
Barryorum Ground Beetle	*Pterostichus barryorum*	Undetermined			
Small-horned Ground Beetle	*Pterostichus brevicornis*	Undetermined			
Bryant's Ground Beetle	*Pterostichus bryanti*	Undetermined	L		
Caribou Ground Beetle	*Pterostichus caribou*	Undetermined			
Wood Ground Beetle	*Pterostichus caudicalis*	Undetermined			
Chipewyan Ground Beetle	*Pterostichus chipewyan*	Undetermined			
Raven Ground Beetle	*Pterostichus corvinus*	Undetermined			
Beaufort Ground Beetle	*Pterostichus costatus*	Undetermined			
Female Ground Beetle	*Pterostichus empetricola*	Undetermined			
Hudson Ground Beetle	*Pterostichus hudsonicus*	Undetermined			
Mandibulate Ground Beetle	*Pterostichus mandibularoides*	Secure			
Decideous Ground Beetle	*Pterostichus pensylvanicus*	Undetermined			
Pingo Ground Beetle	*Pterostichus pinguedineus*	Secure			
Elegant Ground Beetle	*Pterostichus punctatissimus*	Undetermined			
Riparian Ground Beetle	*Pterostichus riparius*	Undetermined			
Soper's Ground Beetle	*Pterostichus soperi*	Undetermined			
Almost-smooth Ground Beetle	*Pterostichus sublaevis*	Undetermined			
Tareumiut Ground Beetle	*Pterostichus tareumiut*	Secure			
Belly Ground Beetle	*Pterostichus ventricosus*	Secure			
Grub Ground Beetle	*Pterostichus vermiculosus*	Secure			
Burning Forest Ground Beetle	*Sericoda bembidioides*	Undetermined			
Campfire Ground Beetle	*Sericoda obsoleta*	Undetermined			
Burnt-wood Ground Beetle	*Sericoda quadripunctata*	Undetermined			
Tundra Ground Beetle	*Stereocerus haematopus*	Undetermined			
Sunshine Ground Beetle	*Syntomus americanus*	Secure			

6.7 Selected Beetles

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Apex Ground Beetle	*Trechus apicalis*	Undetermined			
Slender-rod Ground Beetle	*Trechus tenuiscapus*	Undetermined			
Coleoptera – Coccinellidae					**Beetles – Lady Beetles**
Two-spot Lady Beetle	*Adalia bipunctata*	Secure			
American Eyespot Lady Beetle	*Anatis mali*	Undetermined			
Marsh Lady Beetle	*Anisosticta bitriangularis*	Secure			
Boreal Lady Beetle	*Anisosticta borealis*	Undetermined			
White-fronted Lady Beetle	*Brachiacantha albifrons*	Undetermined			
Winter Lady Beetle	*Brumoides septentrionis*	Undetermined			
Cream-spotted Lady Beetle	*Calvia quatuordecimguttata*	Secure			
Ulke's Lady Beetle	*Ceratomegilla ulkei*	Undetermined			
Nice Lady Beetle	*Coccidula lepida*	Undetermined			
Shining Lady Beetle	*Coccinella fulgida*	Undetermined			
Hieroglyphic Lady Beetle	*Coccinella hieroglyphica*	Undetermined			
Tamarack Lady Beetle	*Coccinella monticola*	Undetermined			
Nine-spot Lady Beetle	*Coccinella novemnotata*	Sensitive			
Transverse Lady Beetle	*Coccinella transversoguttata*	Undetermined			
Three-banded Lady Beetle	*Coccinella trifasciata*	Secure			
Twice-stained Lady Beetle	*Didion punctatum*	Undetermined			
American Lady Beetle	*Hippodamia americana*	Undetermined			
Waterside Lady Beetle	*Hippodamia falcigera*	Secure			
Parenthesis Lady Beetle	*Hippodamia parenthesis*	Secure			
Five-marked Lady Beetle	*Hippodamia quinquesignata*	Secure			
Sinuate Lady Beetle	*Hippodamia sinuata*	Secure			
Thirteen-spot Lady Beetle	*Hippodamia tredecimpunctata*	Secure			
Poorly-known Lady Beetle	*Hyperaspis consimilis*	Undetermined			
Episcopalian Lady Beetle	*Macronaemia episcopalis*	Undetermined			
Farmer's Lady Beetle	*Nephus georgei*	Undetermined			
Twenty-spotted Lady Beetle	*Psyllobora vigintimaculata*	Secure			
Lacustrine Lady Beetle	*Scymnus lacustris*	Undetermined			
Coleoptera – Dytiscidae					**Beetles – Predaceous Diving Beetles**
Athabascan Predaceous Diving Beetle	*Acilius athabascae*	Undetermined	L		
Woods Predaceous Diving Beetle	*Acilius semisulcatus*	Secure			
Rockshore Agabus Beetle	*Agabus adpressus*	Undetermined	L		
Ajax Agabus Beetle	*Agabus ajax*	Undetermined	L		
Ambiguous Agabus Beetle	*Agabus ambiguus*	Undetermined	L		
Antenna Agabus Beetle	*Agabus antennatus*	Secure			
Boreal Lake Agabus Beetle	*Agabus anthracinus*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Arctic Agabus Beetle	*Agabus arcticus*	Secure			
Auden's Agabus Beetle	*Agabus audeni*	Secure			
Cordilleran Agabus Beetle	*Agabus austinii*	Undetermined	L		
Two-colour Agabus Beetle	*Agabus bicolor*	Secure			
Twofold Agabus Beetle	*Agabus bifarius*	Secure			
Clavicornis Agabus Beetle	*Agabus clavicornis*	Secure			
Clypealis Agabus Beetle	*Agabus clypealis*	Undetermined	L		
Confinis Agabus Beetle	*Agabus confinis*	Secure			
Coxalis Agabus Beetle	*Agabus coxalis*	Undetermined	L		
Discoloured Agabus Beetle	*Agabus discolor*	Secure			
Long Agabus Beetle	*Agabus elongatus*	Secure			
Erichson's Agabus Beetle	*Agabus erichsoni*	Secure			
Brown-pen Agabus Beetle	*Agabus fuscipennis*	Undetermined	L		
Brown Agabus Beetle	*Agabus infuscatus*	Secure			
Graffiti Agabus Beetle	*Agabus inscriptus*	Secure			
Mackenzie Agabus Beetle	*Agabus mackenziensis*	Undetermined	L		
Northern Agabus Beetle	*Agabus moestus*	Secure			
Opaque Agabus Beetle	*Agabus opacus*	Undetermined	L		
Pale Agabus Beetle	*Agabus pallens*	Undetermined	L		
Phaeopterus Agabus Beetle	*Agabus phaeopterus*	Secure			
Comma Agabus Beetle	*Agabus semipunctatus*	Secure			
Dotlined Agabus Beetle	*Agabus seriatus*	Undetermined	L		
Strigulose Agabus Beetle	*Agabus strigulosus*	Undetermined	L		
Thomson's Agabus Beetle	*Agabus thomsoni*	Secure			
Drab Agabus Beetle	*Agabus tristis*	Undetermined	L		
Rapid Agabus Beetle	*Agabus velox*	Undetermined	L		
Wasa Star Agabus Beetle	*Agabus wasastjernae*	Secure			
Zetterstedt's Agabus Beetle	*Agabus zetterstedtii*	Undetermined	L		
Thick-footed Diving Beetle	*Carrhydrus crassipes*	Undetermined	L		
Dahuricus Predaceous Diving Beetle	*Colymbetes dahuricus*	Secure			
Greenland Predaceous Diving Beetle	*Colymbetes dolabratus*	Secure			
Exaratus Predaceous Diving Beetle	*Colymbetes exaratus*	Undetermined	L		
Bog Predaceous Diving Beetle	*Colymbetes paykulli*	Secure			
Forest Predaceous Diving Beetle	*Colymbetes sculptilis*	Undetermined	L		
Convex Predaceous Diving Beetle	*Desmopachria convexa*	Secure			
Ringed Dystiscid Beetle	*Dystiscus circumcinctus*	Secure			
Daurian Dystiscid Beetle	*Dystiscus dauricus*	Secure			

6.7 Selected Beetles

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Bigbelly Dystiscid Beetle	*Dystiscus fasciventris*	Undetermined	L		
Harris's Dystiscid Beetle	*Dystiscus harrisii*	Secure			
Alaska Predaceous Diving Beetle	*Dytiscus alaskanus*	Secure			
Liberus Predaceous Diving Beetle	*Graphoderus liberus*	Undetermined	L		
Occidental Predaceous Diving Beetle	*Graphoderus occidentalis*	Undetermined	L		
Complex Predaceous Diving Beetle	*Graphoderus perplexus*	Secure			
Aruspex Predaceous Diving Beetle	*Hydaticus aruspex*	Secure			
Paugus Predaceous Diving Beetle	*Hydrocolus paugus*	Secure			
Ruby Predaceous Diving Beetle	*Hydrocolus rubyae*	Undetermined	L		
Stagnalis Predaceous Diving Beetle	*Hydrocolus stagnalis*	Undetermined	L		
Appalachian Water Beetle	*Hydroporus appalachis*	Secure			
Aurora Water Beetle	*Hydroporus aurora*	Undetermined	L		
Badiellus Water Beetle	*Hydroporus badiellus*	Secure			
Taiga Water Beetle	*Hydroporus boraeorum*	Undetermined	L		
Columbia Water Beetle	*Hydroporus columbianus*	Secure			
Lace Water Beetle	*Hydroporus dentellus*	Secure			
Despectus Water Beetle	*Hydroporus despectus*	Undetermined	L		
Brownish Water Beetle	*Hydroporus fuscipennis*	Secure			
Mountain Boreal Water Beetle	*Hydroporus geniculatus*	Undetermined	L		
Lapland Water Beetle	*Hydroporus lapponum*	Secure			
Larson's Water Beetle	*Hydroporus larsoni*	Secure			
Mannerheim's Water Beetle	*Hydroporus mannerheimi*	Undetermined	L		
Morio Water Beetle	*Hydroporus morio*	Secure			
High Boreal Water Beetle	*Hydroporus nigellus*	Secure			
Noble Water Beetle	*Hydroporus notabilis*	Secure			
Dark Water Beetle	*Hydroporus obscurus*	Secure			
Western Water Beetle	*Hydroporus occidentalis*	Undetermined	L		
Polar Water Beetle	*Hydroporus polaris*	Secure			
Hairy Water Beetle	*Hydroporus puberulus*	Secure			
Strait Water Beetle	*Hydroporus rectus*	Secure			
Reddish Water Beetle	*Hydroporus rufinasus*	Secure			
Siberian Water Beetle	*Hydroporus sibiricus*	Undetermined	L		
Marked Water Beetle	*Hydroporus signatus*	Undetermined	L		
Common Boreal Water Beetle	*Hydroporus striola*	Secure			
Mixed Boreal Water Beetle	*Hydroporus tartaricus*	Undetermined	L		
Bronzed Water Beetle	*Hydroporus tenebrorus*	Secure			
Plain Water Beetle	*Hydroporus tristis*	Secure			
Mud Diving Beetle	*Hygrotus turbidus*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Bigdot Diving Beetle	*Hygrotus impressopunctatus*	Secure			
Dark-brown Diving Beetle	*Hygrotus infuscatus*	Secure			
Laccophilinus Diving Beetle	*Hygrotus laccophilinus*	Undetermined	L		
Marklin's Diving Beetle	*Hygrotus marklini*	Secure			
Nine-lined Diving Beetle	*Hygrotus novemlineatus*	Secure			
Patruelis Diving Beetle	*Hygrotus patruelis*	Secure			
Pied Diving Beetle	*Hygrotus picatus*	Secure			
Halophilic Diving Beetle	*Hygrotus salinarius*	Secure			
Say's Diving Beetle	*Hygrotus sayi*	Secure			
Sellatus Diving Beetle	*Hygrotus sellatus*	Undetermined	L		
Suturalis Diving Beetle	*Hygrotus suturalis*	Secure			
Bulging Diving Beetle	*Hygrotus tumidiventris*	Secure			
Nail Diving Beetle	*Hygrotus unguicularis*	Secure			
Angus Predaceous Diving Beetle	*Ilybius angustior*	Undetermined			
Churchill Predaceous Diving Beetle	*Ilybius churchillensis*	Undetermined	L		
Common Boreal Predaceous Water Beetle	*Ilybius discedens*	Secure			
Prairie Predaceous Diving Beetle	*Ilybius fraterculus*	Undetermined	L		
Picipes Predaceous Diving Beetle	*Ilybius picipes*	Secure			
Pleuriticus Predaceous Diving Beetle	*Ilybius pleuriticus*	Secure			
Subaeneus Predaceous Diving Beetle	*Ilybius subaeneus*	Secure			
Taiga Predaceous Diving Beetle	*Ilybius vittiger*	Undetermined	L		
Two-spotted Predaceous Diving Beetle	*Laccophilus biguttatus*	Secure			
Horned Predaceous Diving Beetle	*Laccornis connoideus*	Secure			
Oblong Predaceous Diving Beetle	*Laccornis oblongus*	Undetermined	L		
Dark Predaceous Diving Beetle	*Liodessus obscurellus*	Secure			
Small Predaceous Diving Beetle	*Nebrioporus depressus*	Undetermined			
Lake Superior Predaceous Diving Beetle	*Neoporus superioris*	Secure			
Twist Predaceous Diving Beetle	*Neoporus undulatus*	Undetermined	L		
Horn's Predaceous Diving Beetle	*Neoscutopterus hornii*	Secure			
Laevis Predaceous Diving Beetle	*Oreodytes laevis*	Secure			
Scitulus Predaceous Diving Beetle	*Oreodytes scitulus*	Undetermined	L		
Seep Swimming Beetle	*Rhantus binotatus*	Undetermined	L		
Grassland Swimming Beetle	*Rhantus consimilis*	Undetermined	L		
Parkland Swimming Beetle	*Rhantus sericanus*	Secure			
Sign Swimming Beetle	*Rhantus sinuatus*	Undetermined	L		

6.7 Selected Beetles

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Suture Swimming Beetle	*Rhantus suturellus*	Secure			
Wallis's Swimming Beetle	*Rhantus wallisi*	Secure			
Compertus Predaceous Diving Beetle	*Sanfilippodytes compertus*	Undetermined	L		
Greystriate Predaceous Diving Beetle	*Stictotarsus griseostriatus*	Secure			
Striate Predaceous Diving Beetle	*Strictotarsus striatellus*	Undetermined	L		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT. There is not enouh information available to determine the range of most species ranks as "Undetermined".

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, 1: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

d The hybrid *Cicindela duodecimguttata X oregona* also occurs in the NWT and can be given a rank of "secure".

1 Changed from At Risk

2 Changed from May Be At Risk

3 Changed from Sensitive

4 Changed from Secure

5 Changed from Undetermined

6 Changed from Not Assessed

7 Changed from Alien

8 Changed from Extirpated

9 Changed from Vagrant

■ Elegant Purple-green Agonum Beetle

Photo Credit: H Goulet

■ Ocellate Creek Beetle
Photo Credit: H Goulet

6.8 Bumblebees

Bumble bees (genus *Bombus*) are common, large and hairy bees found in temperate to subarctic regions around the world. There are about 250 species of bumble bees globally; 43 species occur in Canada. Twenty-one species of bumble bees occur in the NWT, where they occur from the northern-most Arctic island to the southern NWT.

White-tailed Bumblebee
Photo Credit: G Watson

Bumble bees are social, living in colonies with a single, dominating queen and many workers (i.e., daughters of the queen). However, unlike their close relatives, the honey bees, which live in a colony or hive year round, bumble bees live in annual colonies. The entire colony, except newly produced queens, dies off at the onset of the first frost. The new queens mate, and are the only individuals to overwinter. In the spring, mated queens emerge from hibernation, begin feeding and then search for a suitable nest site.

Generally, nests are constructed underground in abandoned rodent burrows or above ground in old logs, under grass mounds, and occasionally under siding, in old mattresses, etc. Once a suitable site is found, the queen begins nest constructing and egg-laying duties. A few weeks after the queen's initial round of egg-laying, workers emerge and begin foraging for the colony to feed the developing worker brood (sisters), while the queen stops performing these duties and becomes a full-time egg layer.

As the summer progresses, the colony reaches maximum worker production and begins producing males and potential new queens. These reproductive individuals leave the nest and mate with bees from other nests. After mating, the young queens seek out suitable wintering sites, thus completing the annual colony cycle.

Overwintering sites for mated queens consist of burrows in loose soil, sand, decomposing vegetation (including mulch) and rotting logs, usually within a few inches of the ground surface. In some species, young queens overwinter near the site of the maternal nest.

The timing of queen emergence in the spring, and the length of the colony cycle, varies widely by species, and probably by geography; bees in arctic/subarctic regions typically produce much fewer workers than southern species. A notable exception to the colony cycle occurs in cuckoo bumble bees. These bumble bees do not produce a worker caste, but are social parasites in which females usurp colonies of other species and propagate using the host species resources.

Bees, including bumblebees, are extremely important pollinators for many native flowering plants, which subsequently provide berries and shelter for many animal species. Bumblebees, as well as other pollinators, are declining in Canada and globally. Scientists are finding that many previously common bee species are declining across their range, including the western bumblebee, present in the NWT. For more information on bumblebee conservation you can visit the Xerces Society.
Link to: http://www.xerces.org/bumblebees/.

Help monitor bee populations by sending observations, questions or pictures of bees to NWTbugs@gov.nt.ca, and we'll give you the buzz on bees!

Dr. Cory S. Sheffield
York University

Claudia Haas
Protected Areas Biologist

List 8. Bumblebees

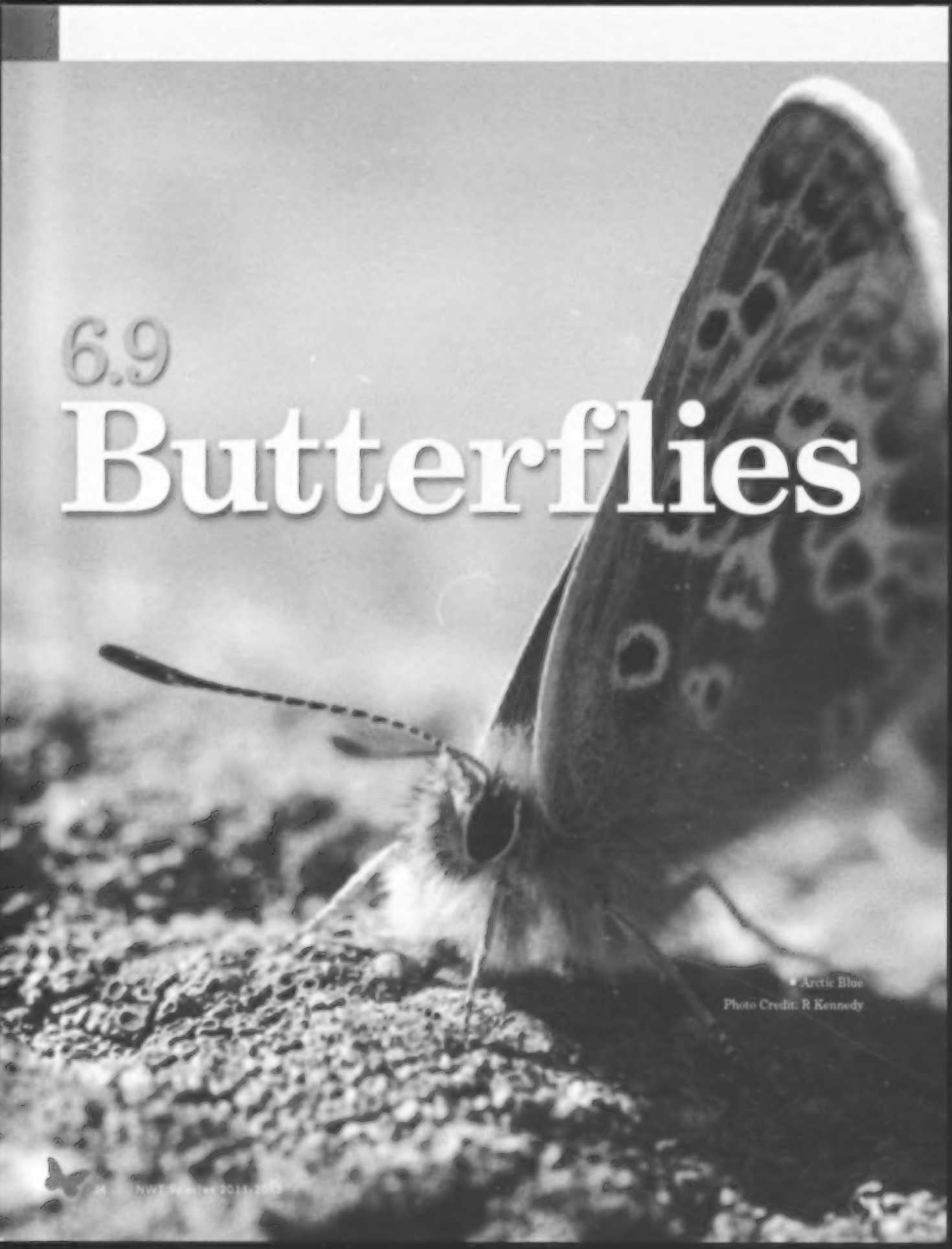
There are 21 species of bumblebees confirmed present in the NWT. Species are listed alphabetically. Taxonomy follows Williams (2010).

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Hymenoptera – Apidae (*Bombus* genus)			**Bee-like insects – Bumblebees**	
Ashton's Cuckoo Bumblebee	*Bombus ashtoni*	Undetermined		
Baltic Bumblebee	*Bombus balteatus*	Undetermined		
Two-ranked Bumblebee	*Bombus bifarius*	Secure		
Northern Amber Bumblebee	*Bombus borealis*	Undetermined		
Fernald's Cuckoo Bumblebee	*Bombus fernaldae*	Secure		
Yellow-faced Bumblebee	*Bombus flavifrons*	Undetermined		
Winter Bumblebee	*Bombus frigidus*	Undetermined		
Subarctic Bumblebee	*Bombus hyperboreus*	Undetermined		
Indiscriminate Bumblebee	*Bombus insularis*	Undetermined	L	
Small Heath Bumblebee	*Bombus jonellus*	Undetermined		
White-tailed Bumblebee	*Bombus lucorum*	Undetermined		
Orange-rumped Bumblebee	*Bombus melanopygus*	Undetermined		
Brown-tailed Bumblebee	*Bombus mixtus*	Undetermined		
Boreal Bumblebee	*Bombus neoboreus*	Undetermined		
Western Bumblebee	*Bombus occidentalis*	Undetermined		
Confusing Bumblebee	*Bombus perplexus*	Undetermined	L	
Northern Bumblebee	*Bombus polaris*	Undetermined		
Sanderson's Bumblebee	*Bombus sandersoni*	Undetermined		
Suckley's Cuckoo Bumblebee	*Bombus suckleyi*	Undetermined		
Red-tailed Bumblebee	*Bombus sylvicola*	Secure		
Yellow-banded Bumblebee	*Bombus terricola*	Undetermined		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

6.9 Butterflies



• Arctic Blue
Photo Credit: R Kennedy

Butterflies are by far the most recognised and loved insects. People have used the presence of butterflies to predict the timing of other phenomena such as the spawning of some fish species and the arrival of warmer weather.

Butterfly life has four stages: egg, caterpillar, chrysalis, and adult butterfly. The adult butterfly lays eggs on the plant species on which its young will feed. Under the right conditions the caterpillar (larva) will develop inside the egg in about a week. When it emerges from the egg, it eats, grows, sheds its old skin, then repeats this, through five stages, or instars. At maturity, its skin splits revealing a chrysalis or pupa. This pupa takes about ten days to transform (metamorphose) into an adult butterfly. This metamorphosis is one of the most fascinating aspects of observing butterflies. Adult butterflies spend much of their time feeding. They drink nectar and other liquids, through the tongue or proboscis; this is a long thin tube that curls beneath the head like a watch spring. Males are always on the lookout for females, and mated females search for the larval foodplants, on which to lay their eggs.

Butterflies and moths comprise the Order Lepidoptera, a name that refers to their scale-covered wings. All butterflies in the NWT were ranked in this report. Some of the moths are ranked in the next list, and more will be ranked in the next report.

NWT butterflies do not migrate but pass the winter here, as an egg, larva, pupa or adult, depending on the species. One of the first butterflies seen in early spring in the NWT is the mourning cloak (*Nymphalis antiopa*). It spends the winter as an adult, hidden from the weather, and then emerges during the first warm days of spring, with its wings often looking rather damaged and worn. In the south, a few butterflies migrate, but only three of these species have ever been found in the NWT as vagrants.

So far, 95 species of butterflies have been observed in the NWT. None were ranked as "May Be At Risk", but four are of global conservation concern and considered rare in the world.

Butterfly Studies Update

Our knowledge of NWT butterflies is increasing most rapidly in the Sahtu Region where many butterfly enthusiasts are reporting their findings annually and visiting remote parts of the region, specially the mountains.

In 2007 Green Marble was reported for the first time in the NWT at Godlin Lake, and then reported again in 2008 at Katharine Creek in the Sahtu Region. The species was probably present in the region before but simply overlooked.

All new information is being used to help determine the general status ranks of butterflies in the NWT.

If you would like to collect butterflies, contact me (NWTbugs@gov.nt.ca) and I will give you tips on how best to proceed. Only collect a very small number of individuals in each site, making sure that the population remain healthy.

Ross Layberry
First Author of "The Butterflies of Canada"
Ottawa, ON

List 9. Butterflies

There are 92 known species of butterflies in the NWT. Three additional species are vagrant to the NWT and occur irregularly. One additional species is expected to be present. Two species are of global conservation concern. Species are listed alphabetically according to scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Pelham (2008).

■ Sentinel Arctic Photo Credit: S Bryan

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Lepidoptera – Hesperiidae					**Scale-winged insects – Skippers**
Common Roadside Skipper	*Amblyscirtes vialis*	Presence Expected			
Arctic Skipper	*Carterocephalus palaemon*	Secure			
Dreamy Duskywing	*Erynnis icelus*	Secure			
Persius Duskywing	*Erynnis persius*	Secure			
Common Branded Skipper	*Hesperia comma*	Secure			
Long Dash Skipper	*Polites mystic*	Undetermined	L		
Peck's Skipper	*Polites peckius*	Undetermined	L		
Grizzled Skipper	*Pyrgus centaureae*	Secure			
Northern Cloudywing	*Thorybes pylades*	Undetermined	L		
Lepidoptera – Lycaenidae					**Scale-winged insects – Delicate-winged butterflies**
Brown Elfin	*Callophrys augustinus*	Secure			
Western Pine Elfin	*Callophrys eryphon*	Secure			
Eastern Pine Elfin	*Callophrys niphon*	Secure			
Hoary Elfin	*Callophrys polios*	Secure			
Northern Spring Azure	*Celastrina lucia*	Secure			
Western Tailed Blue	*Cupido amyntula*	Secure			
Silvery Blue	*Glaucopsyche lygdamus*	Secure			
Dorcas Copper	*Lycaena dorcas*	Secure			
Bronze Copper	*Lycaena hyllus*	Undetermined			
American Copper	*Lycaena phlaeas*	Secure			
Arctic Blue	*Plebejus glandon*	Secure			
Northern Blue	*Plebejus idas (anna)*	Secure			
Greenish Blue	*Plebejus saepiolus*	Secure			
Cranberry Blue	*Plebejus optilete*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Lepidoptera – Nymphalidae		**Scale-winged insects – Brush-footed butterflies**			
Milbert's Tortoiseshell	*Aglais milberti*	Secure			
Mountain Fritillary	*Boloria alaskensis*	Secure			
Astarte Fritillary	*Boloria astarte*	Secure			
Meadow Fritillary	*Boloria bellona*	Secure			
Arctic Fritillary	*Boloria chariclea*	Secure			
Bog Fritillary	*Boloria eunomia*	Secure			
Freija Fritillary	*Boloria freija*	Secure			
Frigga Fritillary	*Boloria frigga*	Secure			
Dingy Fritillary	*Boloria improba*	Secure			
Beringian Fritillary	*Boloria natazhati*	Sensitive	L		G3 - 2007
Polaris Fritillary	*Boloria polaris*	Secure			
Silver-bordered Fritillary	*Boloria selene*	Secure			
Common Ringlet	*Coenonympha tullia*	Secure			
Monarch	*Danaus plexippus*	Vagrant	X		
Disa Alpine	*Erebia disa*	Secure			
Red-disked Alpine	*Erebia discoidalis*	Secure			
Branded Alpine	*Erebia fasciata*	Secure			
Reddish Alpine	*Erebia lafontainei*	Sensitive			
Mt. Mackinley Alpine	*Erebia mackinleyensis*	Secure		3[d]	
Magdalena Alpine	*Erebia magdalena*	Undetermined	L		
Taiga Alpine	*Erebia mancinus*	Secure			
Scree Alpine	*Erebia occulta*	Sensitive	L		
Yellow-dotted Alpine	*Erebia pawlowskii*	Undetermined	L		
Ross's Alpine	*Erebia rossii*	Secure			
Four-dotted Alpine	*Erebia youngi*	Sensitive			
Eyed Brown	*Lethe eurydice*	Sensitive			
Viceroy	*Limenitis archippus*	Undetermined			
White Admiral	*Limenitis arthemis*	Secure			
Mourning Cloak	*Nymphalis antiopa*	Secure			
Compton Tortoiseshell	*Nymphalis j-album*	Secure			
Sentinel Arctic	*Oeneis alpina*	Secure			G3G4 - 2007
White-Veined Arctic	*Oeneis bore*	Secure			
Chryxus Arctic	*Oeneis chryxus*	Secure			
Jutta Arctic	*Oeneis jutta*	Secure			
Macoun's Arctic	*Oeneis macounii*	Undetermined			
Melissa Arctic	*Oeneis melissa*	Secure			
Philip's Arctic	*Oeneis philipi*	Sensitive	L		

6.9 Butterflies

Common Name	Scientific Species Name	Status Rank	Range Note[1]	Reason for Change[2]	COSEWIC Status/ Global Conservation Concern[3]
Polixenes Arctic	*Oeneis polixenes*	Secure			
Uhler's Arctic	*Oeneis uhleri*	Secure			
Tawny Crescent	*Phyciodes batesii*	Undetermined			
Northern Crescent	*Phyciodes cocyta*	Secure			
Field Crescent	*Phyciodes pulchella*	Secure			
Green Comma	*Polygonia faunus*	Secure			
Hoary Comma	*Polygonia gracilis*	Secure			
Grey Comma	*Polygonia progne*	Secure			
Satyr Comma	*Polygonia satyrus*	Secure			
Atlantis Fritillary	*Speyeria atlantis*	Undetermined			
Northwestern Fritillary	*Speyeria hesperis*	Secure			
Mormon Fritillary	*Speyeria mormonia*	Undetermined	L		
Red Admiral	*Vanessa atalanta*	Vagrant	X		
Painted Lady	*Vanessa cardui*	Vagrant	X		
Lepidoptera – Papilionidae					**Scale-winged insects – Swallowtails**
Canadian Tiger Swallowtail	*Papilio canadensis*	Secure			
Old World Swallowtail	*Papilio machaon*	Secure			
Eversmann's Parnassian	*Parnassius eversmanni*	Undetermined	L		
Phoebus Parnassian	*Parnassius phoebus*	Undetermined	L		
Lepidoptera – Pieridae					**Scale-winged insects – Whites and Sulphurs**
Canada Sulphur	*Colias canadensis*	Secure			
Christina Sulphur	*Colias christina*	Secure			
Giant Sulphur	*Colias gigantea*	Secure			
Hecla Sulphur	*Colias hecla*	Secure			
Pink-edged Sulphur	*Colias interior*	Undetermined	L		
Labrador Sulphur	*Colias nastes*	Secure			
Palaeno Sulphur	*Colias palaeno*	Secure			
Pelidne Sulphur	*Colias pelidne*	Undetermined			
Clouded Sulphur	*Colias philodice*	Secure			
Booth's Sulphur	*Colias tyche*	Secure			
Large Marble	*Euchloe ausonides*	Secure			
Northern Marble	*Euchloe creusa*	Secure			
Green Marble	*Euchloe naina*	Undetermined		#	
Arctic White	*Pieris angelika*	Secure			
Mustard White	*Pieris oleracea*	Secure			
Cabbage White	*Pieris rapae*	Alien	X		
Western White	*Pontia occidentalis*	Secure			
Spring White	*Pontia sisymbrii*	Secure			

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, Ξ: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, II: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

1 Changed from At Risk

2 Changed from May Be At Risk

3 Changed from Sensitive

4 Changed from Secure

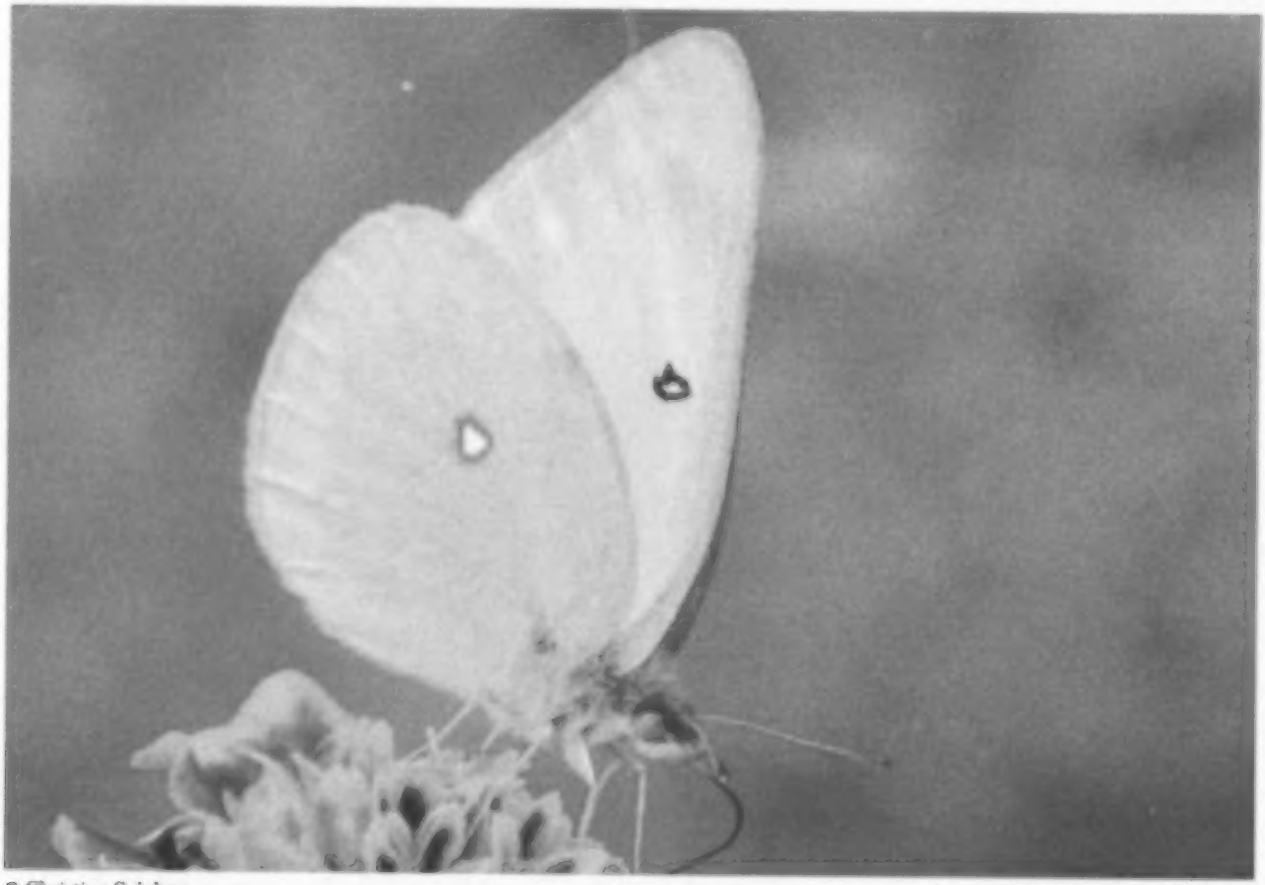
5 Changed from Undetermined

6 Changed from Not Assessed

7 Changed from Alien

8 Changed from Extirpated

9 Changed from Vagrant

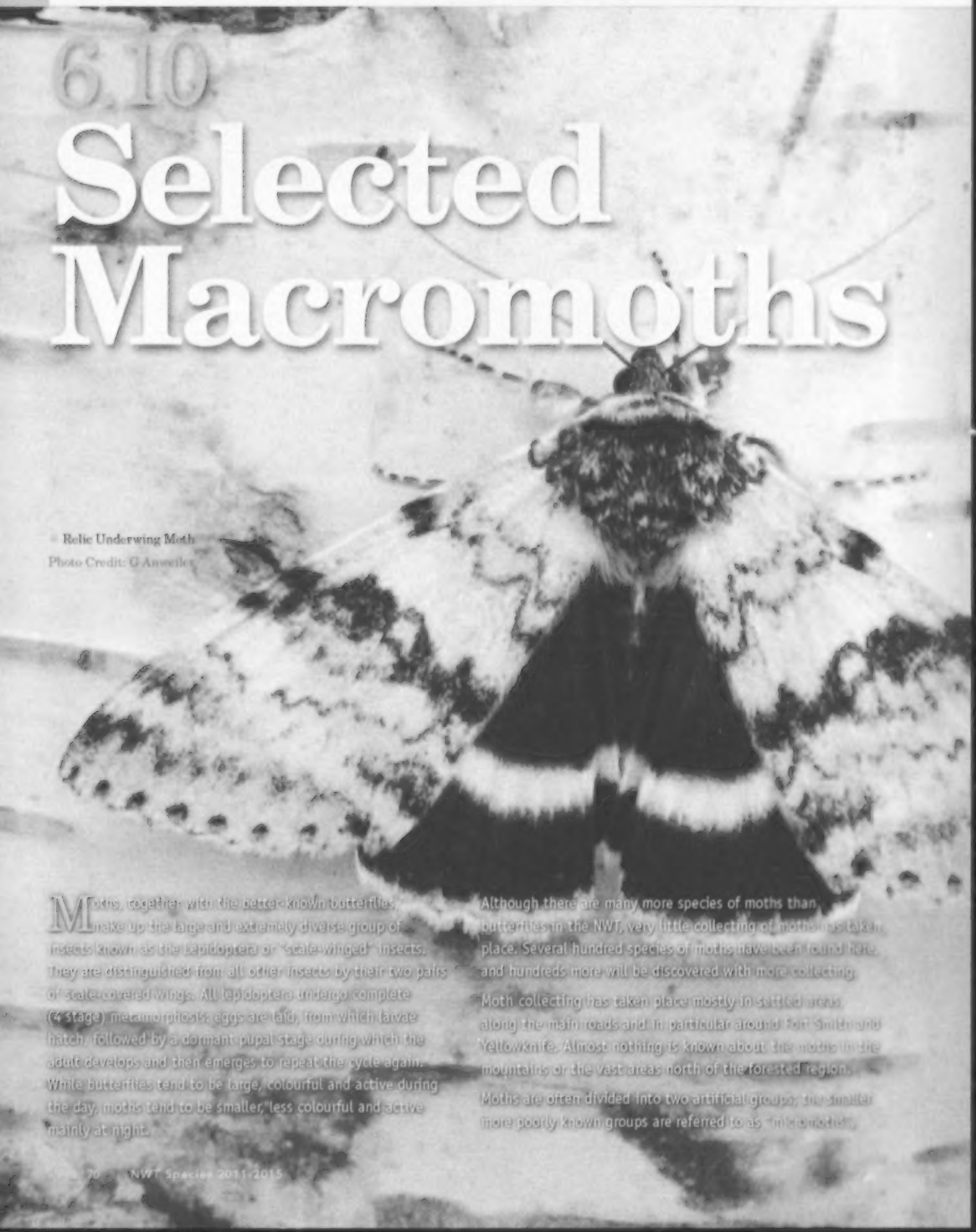


■ Christina Sulphur

Photo Credit: B Fournier

6.10

Selected Macromoths



Relic Underwing Moth
Photo Credit: G Anweiler

Moths, together with the better-known butterflies, make up the large and extremely diverse group of insects known as the Lepidoptera or "scale-winged" insects. They are distinguished from all other insects by their two pairs of scale-covered wings. All lepidoptera undergo complete (4 stage) metamorphosis: eggs are laid, from which larvae hatch, followed by a dormant pupal stage during which the adult develops and then emerges to repeat the cycle again. While butterflies tend to be large, colourful and active during the day, moths tend to be smaller, less colourful and active mainly at night.

Although there are many more species of moths than butterflies in the NWT, very little collecting of moths has taken place. Several hundred species of moths have been found here, and hundreds more will be discovered with more collecting.

Moth collecting has taken place mostly in settled areas along the main roads and in particular around Fort Smith and Yellowknife. Almost nothing is known about the moths in the mountains or the vast areas north of the forested regions.

Moths are often divided into two artificial groups; the smaller more poorly known groups are referred to as "micromoths".

and the larger better known groups referred to as "macromoths". Although often extremely small, some micromoth species are very significant pests of plants, including forest trees and agricultural crops. The larger macromoths (up to 10 cm wingspan) are the ones that most people encounter. A few of these are also well-known forest pests.

Moths are an important part of the ecosystem, recycling plant material, pollinating plants and providing an important food source for a wide range of birds and other animals.

The list on page 72 includes only a few groups of the largest and more colourful macromoths in the NWT.

By far the largest moth found in the NWT is the Glover's silkmoth (Saturniidae, *Hyalophora gloveri*). It is the size of a small man's hand, with deep maroon-coloured wings and an eye-spot on each forewing. It is rare the NWT, more common in the south. They have been recorded as far north as Hay River. They are nocturnal and come to lights, and like most nocturnal moths, are most often encountered in the morning, resting near the lights that attracted them the night before.

Some sphinx moths (Sphingidae) are almost as large in body as the silk moths, but the forewings are long and narrow. Most of the northern species are active during the day and may be seen getting nectar at flowers while on the wing. At such times they greatly resemble hummingbirds. Their forewings are drab in colour, and when at rest hide the more colourful banded pink or yellow hindwings. The larvae of most species have a small characteristic "horn" on the rear end, and are known as hornworms.

The underwing moths (Erebidae, *Catocala* genus) are the size of a large butterfly. The forewings are mottled grey and black and provide the moth with excellent camouflage when resting on tree trunks. The hindwings are strongly patterned black and white or bright red with black bands. Only two of many species have been reported from NWT, one (Relict Underwing) with white-banded black hindwings and the other (Briseis Underwing) with black-banded scarlet hindwings.

The Arctic tiger moths (Erebidae, Arctiinae sub-*Family*) are a large and mostly colourful group of medium to large size moths. Many species of Arctiids have evolved the ability to extract distasteful and toxic chemicals from the plants they eat as a caterpillar and use this as a defense against the birds and small animals that try to eat them. Many of these species have tough bodies and, when attacked, they exude droplets of this distasteful chemical through glands in their body, causing the predator to let them go unharmed. Most also have brightly coloured red or orange and black hindwings, which make them easy to recognize, and warn predators that they are not good to eat.

If you have pictures of moths and would like to know which species they are or would like to share some observations and insights you have on their behaviour in your area, send us a note at NWTBUGS@gov.nt.ca, and let's talk about moths!

Gary Anweiler
Alberta Lepidopterists' Guild

Chris Schmidt
Entomologist, Canadian Food Inspection Agency

Mike Gravel
Forest Ecologist, GNWT

On taking pictures of northern biodiversity, including moths:

"My camera can help me to remember details of animals, plants and fungi that I may have seen for only a moment. I can use their images to research and find out more about them. Pictures also help me to easily communicate with others, who may not have the good fortune to live where I do. Life struggles heroically here, and that is beautiful."

– Jenny Tucker, Yellowknife

List 10. Selected Macromoths

There are 21 known species of tiger moths, one species of silk moth, two species of underwing moths, and six species of sphinx moths confirmed present in the NWT. Two species are of global conservation concern. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Canadian Biodiversity Information Facility 2003 and Schmidt and Opler 2008.

Glover's Silkmoth Larvae Photo Credit: G Anweiler

Common Name	Scientific Species Name	Status Rank	Range Note*	Global Conservation Concern*
Lepidoptera – Erebidae (Arctiinae sub-Family)				Scale-winged insects – Arctic Tiger Moths
Arctic Tiger Moth	*Acerbia alpina*	Undetermined		G3G4
Rockslide Tiger Moth	*Acsala anomala*	Undetermined		
Short-winged Tiger Moth	*Arctia brachyptera*	Undetermined		
Opulent Tiger Moth	*Arctia opulenta*	Undetermined		
Yellow-collared Tiger Moth	*Cisseps fulvicollis*	Undetermined		
Alberta Dodia Tiger Moth	*Dodia albertae*	Undetermined		
Smoky Tiger Moth	*Eilema bicolor*	Undetermined		
Salt-marsh Tiger Moth	*Estigmene acrea*	Secure		
Margo's Tiger Moth	*Grammia margo*	Undetermined	L	
Phillip's Tiger Moth	*Grammia philipiana*	Undetermined	L	G3
Quensel's Tiger Moth	*Grammia quenseli*	Secure		
Bog Tiger Moth	*Grammia speciosa*	Undetermined		
William's Tiger Moth	*Grammia williamsii*	Undetermined		
Yukon Tiger Moth	*Grammia yukona*	Undetermined		
Steppe Tiger Moth	*Holarctia obliterata*	Undetermined		
Subarctic Tiger Moth	*Pararctia lapponica*	Undetermined		
Mountain Tiger Moth	*Pararctia yarrowii*	Undetermined		
Black-and-White Tiger Moth	*Parasemia plantaginis*	Undetermined		
Ruby Tiger Moth	*Phragmatobia fuliginosa*	Undetermined		
St. Lawrence Tiger Moth	*Platarctia parthenos*	Secure		
Salmon Virbia Tiger Moth	*Virbia ferruginosa*	Undetermined		
Lepidoptera – Erebidae (*Catocala* genus)				Scale-winged insects – Underwing Moths
Briseis Underwing Moth	*Catocala briseis*	Undetermined		
Relic Underwing Moth	*Catocala relicta*	Undetermined		
Lepidoptera – Saturniidae				Scale-winged insects – Silk Moths
Glover's Silkmoth	*Hyalophora gloveri*	Sensitive	L	

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Lepidoptera – Sphingidae				Scale-winged insects – Sphinx Moths
Snowberry Clearwing Moth	*Hemaris diffinis*	Undetermined		
Hummingbird Clearwing Moth	*Hemaris thysbe*	Undetermined		
Bedstraw Hawk Moth	*Hyles gallii*	Undetermined		
Yellow-banded Sphinx Moth	*Proserpinus flavofasciata*	Undetermined		
One-eyed Sphinx Moth	*Smerinthus cerisyi*	Undetermined		
Birch Sphinx Moth	*Sphinx luscitiosa*	Undetermined		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

Bedstraw Hawk Moth

Photo Credit: J Tucker

6.11 Dragonflies and Damselflies

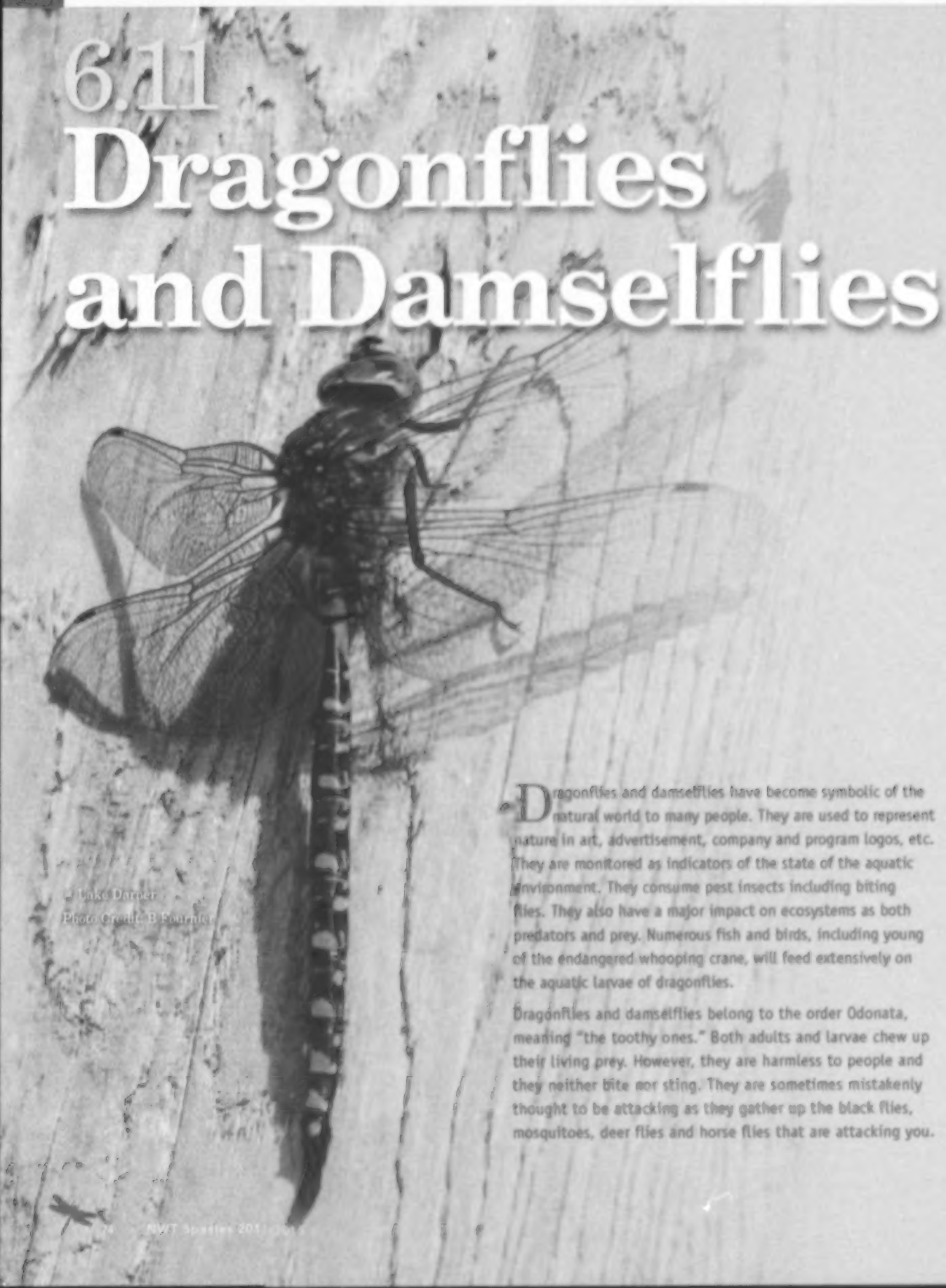


Photo Credit: B Fournier

Dragonflies and damselflies have become symbolic of the natural world to many people. They are used to represent nature in art, advertisement, company and program logos, etc. They are monitored as indicators of the state of the aquatic environment. They consume pest insects including biting flies. They also have a major impact on ecosystems as both predators and prey. Numerous fish and birds, including young of the endangered whooping crane, will feed extensively on the aquatic larvae of dragonflies.

Dragonflies and damselflies belong to the order Odonata, meaning "the toothy ones." Both adults and larvae chew up their living prey. However, they are harmless to people and they neither bite nor sting. They are sometimes mistakenly thought to be attacking as they gather up the black flies, mosquitoes, deer flies and horse flies that are attacking you.

The Odonates have large wings, elongate bodies and small bristle-like antennae; this is a very distinctive group of insects. Dragonflies hold their wings horizontally and have a compact head with the eyes separated by a small space less than their own width. Damselflies differ in having their wings held above the body (vertically) when at rest and they have a large space between the eyes, greater than their own width.

Flying adults lay eggs in or near the water. The tiny eggs hatch in a week or overwinter, hatching in the spring. The brown/green aquatic larvae, called nymphs, have a clawed lower lip that can be projected at a speed of 1/100th of a second to capture prey. Nymphs grow by molting their skin 8-17 times. Mature nymphs then leave the water and expand by swallowing air. This splits the skin and a pale creature emerges. The wings at first appear shrivelled, but they soon expand. At the same time the exoskeleton hardens and colours develop. Within a few hours of emerging from the water, the dragonfly is full-grown and launches on its first flight. Males of some species defend territories and others indulge in complex mating flights. When mating, the male holds the front of the female with the tip of his abdomen.

There are 42 species in the NWT. Sizes range from the very large lake darner (8 cm long) to the delicate metallic green sedge sprite (3 cm long). Some species are found only in specific aquatic habitats. For example, nymphs of the boreal snakestail occur only in fast flowing water including rapids and waterfalls. The nymphs of the white-faced meadowhawk inhabit shallow temporary pools. Most of the NWT dragonflies occur in the boreal forest zone and only a few species such as the sedge darner and the zigzag darner extend out onto the tundra.

According to our most current information, three NWT species may be at risk. The treeline emerald occurs only near Inuvik and the elusive clubtail occurs only along the lower reaches of Hay River. The forcipate emerald is known from two localities but appears to be associated with tiny pools in some burned muskegs.

Although we have some good information and a book about the dragonflies of the NWT, there is still much to be learned. As recently as 2010, a spectacular species (river jewelwing) with black wingtips and a metallic green body was discovered in the NWT for the first time, living on a section of the Kakisa River hundreds of kilometres from its nearest occurrence in central Alberta.

More information on NWT Odonates is available on the **www.enr.gov.nt.ca** web page.

If you are visiting or living in any NWT region, you may be able to help document the dragonfly fauna of the North. Photos are welcome. Collecting specimens may be done but only if you see that the population is large. Collected insects should be placed individually with wings folded over the back in an envelope. The date, location and collector's name should be noted on the envelope. Next the envelopes should be frozen, put in a dry place to dry out and shipped in a box to prevent damage. They may be shipped to ENR. Contact NWTbugs@gov.nt.ca for more tips and a mailing address.

Dr. Paul M. Catling
Agriculture and Agri-food Canada

■ River Jewelwing Photo Credit: P Catling

List 11. Dragonflies and Damselflies

There are 42 species of Odonates in the NWT. One species, the elusive clubtail, is of global conservation concern. None of the species are alien. Species in the *Order* "Odonata" include all dragonflies and damselflies. The true dragonflies are part of the *Suborder* "Epiprocta", but all North America species are of the *Infraorder* "Anisoptera", so we used this grouping in the list. Damselflies are part of the Suborder "Zygoptera". Species are listed alphabetically according to the *Suborder/ Infraorder* they belong to, then by *Family*, then by scientific species name. Taxonomy follows and Needham et al. (2000) for dragonflies, and Westfall and May (2006) for damselflies.

■ Four-spotted Skimmer Photo Credit: B Fournier

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Odonata					**Dragonflies and Damselflies**
Anisoptera – Aeshnidae					**Dragonflies – Darners**
Canada Darner	*Aeshna canadensis*	Undetermined	L		
Lake Darner	*Aeshna eremita*	Secure			
Variable Darner	*Aeshna interrupta*	Secure			
Sedge Darner	*Aeshna juncea*	Secure			
Azure Darner	*Aeshna septentrionalis*	Secure			
Zigzag Darner	*Aeshna sitchensis*	Secure			
Subarctic Darner	*Aeshna subarctica*	Secure			
Shadow Darner	*Aeshna umbrosa*	Secure			
Anisoptera – Corduliidae					**Dragonflies – Emeralds**
American Emerald	*Cordulia shurtleffi*	Secure			
Ringed Emerald	*Somatochlora albicincta*	Secure			
Forcipate Emerald	*Somatochlora forcipata*	May Be At Risk	L		
Delicate Emerald	*Somatochlora franklini*	Undetermined			
Hudsonian Emerald	*Somatochlora hudsonica*	Secure			
Kennedy's Emerald	*Somatochlora kennedyi*	Secure			
Ocellated Emerald	*Somatochlora minor*	Sensitive	L		
Treeline Emerald	*Somatochlora sahlbergi*	May Be At Risk	L		
Muskeg Emerald	*Somatochlora septentrionalis*	Undetermined	L		
Anisoptera – Gomphidae					**Dragonflies – Clubtails and relatives**
Boreal Snaketail	*Ophiogomphus colubrinus*	Secure			
Elusive Clubtail	*Stylurus notatus*	May Be At Risk	L		G3 - 2007

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	Global Conservation Concern[c]
Anisoptera – Libellulidae					**Dragonflies – Skimmers and relatives**
Boreal Whiteface	*Leucorrhinia borealis*	Secure			
Hudsonian Whiteface	*Leucorrhinia hudsonica*	Secure			
Canada Whiteface	*Leucorrhinia patricia*	Secure			
Variable Whiteface	*Leucorrhinia proxima*	Secure			
Four-spotted Skimmer	*Libellula quadrimaculata*	Secure			
Saffron-winged Meadowhawk	*Sympetrum costiferum*	Secure			
Black Meadowhawk	*Sympetrum danae*	Secure			
Cherry-faced Meadowhawk	*Sympetrum internum*	Secure			
Red-veined Meadowhawk	*Sympetrum madidum*	Secure			
White-faced Meadowhawk	*Sympetrum obtrusum*	Secure			
Zygoptera – Calopterygidae					**Damselflies – Broad-winged Damselflies**
River Jewelwing	*Calopteryx aequabilis*	Undetermined	L	#	
Zygoptera – Coenagrionidae					**Damselflies – Pond Damselflies**
Prairie Bluet	*Coenagrion angulatum*	Undetermined			
Subarctic Bluet	*Coenagrion interrogatum*	Undetermined			
Taiga Bluet	*Coenagrion resolutum*	Secure			
Northern Bluet	*Enallagma annexum*	Secure			
Boreal Bluet	*Enallagma boreale*	Secure			
Marsh Bluet	*Enallagma ebrium*	Secure			
Hagen's Bluet	*Enallagma hageni*	Undetermined	L		
Sedge Sprite	*Nehalennia irene*	Secure			
Zygoptera – Lestidae					**Damselflies – Spreadwings**
Spotted Spreadwing	*Lestes congener*	Secure			
Common Spreadwing	*Lestes disjunctus*	Secure			
Emerald Spreadwing	*Lestes dryas*	Secure			
Sweetflag Spreadwing	*Lestes forcipatus*	Secure			

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, #: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, !!: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

1 Changed from At Risk
2 Changed from May Be At Risk
3 Changed from Sensitive
4 Changed from Secure
5 Changed from Undetermined
6 Changed from Not Assessed
7 Changed from Alien
8 Changed from Extirpated
9 Changed from Vagrant

Agitated Deer Fly
Photo Credit: S.Lutz

6.12 Selected Biting Insects

Biting insects are a conspicuous part of northern biodiversity. They are important to monitor both because changes in their species distribution and abundance are excellent indicators of northern ecosystem changes. Healthy northern ecosystems have lots of biting insects!

All the biting insects in the list below are part of the order Diptera, called "true flies". They all possess one pair of wings and develop in four stages: egg, larva, pupa, and adult. Only the females will bite. Most biting females will use chemical clues to find a target. The most important clue is carbon dioxide. So waving our arms to chase biting insects away will usually only serve to advertise our presence and attract more.

Mosquitoes

Mosquitoes (Culicidae) are slender flies with long legs and scale-covered bodies. They differ in colour from dark browns to yellows and have varying patterns of banding on their bodies and legs. Only female mosquitoes will take bloc d with a special proboscis as they may require a blood-meal to develop their eggs. Not all mosquito species need blood; many northern species can produce eggs without a blood-meal. Mosquitoes are very dependent on humidity as they develop from eggs to pupa in standing or slow-running waters. Many species will lay eggs only in very specific aquatic habitats, such as pools of snowmelt. Arctic species will hatch only if eggs are subjected to very low temperatures before hatching.

Most species survive the winter as eggs. Some species survive the cold season hibernating as gravid females in the adult stage, and will be found flying in very early spring when open water is not yet available. These species are mostly known to northerners as the "big dumb spring ones" because they are slow flying and seem to require some time before they start taking a blood-meal.

Mosquitoes play an important part in northern ecosystems as their larvae are food for fish, as well as dragonflies and other aquatic invertebrates. Adult mosquitoes provide an abundant source of food for birds and bats. Mosquitoes will feed on nectar for energy, and in the North, they are one of the main pollinating insects. Their fast reproductive cycles and dependency on minimum temperatures and water makes mosquitoes a good indicator for environmental changes. Rising temperatures facilitate a longer season and the development of more generations of mosquitoes. Also, species previously unseen in the NWT will potentially be able to establish themselves here.

Thirty-four species of mosquitoes have been recorded in the NWT. A species gradient can be seen across the NWT - in the southern, forested regions the diversity of species is high, whereas in the northern tundra regions, often only two to three species are found on a regular basis.

A mosquito monitoring program was initiated in the NWT since West Nile Virus was introduced by accident into Canada in 2001. This program has resulted in updated information on the distribution of mosquito species in the NWT. Other projects on insect harassment provide additional information. Only certain species of mosquitoes are able to transmit viral diseases to humans and mammals. The mosquitoes transmitting West Nile virus were found in small numbers in the southern NWT, but so far, no mosquitoes collected here have been found to replicate the West Nile Virus.

Black Flies

Black flies (Simulidae) are very small flies usually black but sometimes with grey, red or yellow hues. They may be called sand flies or brûlots. There are 58 species already recorded in the NWT. More are expected. Surveys in the Sahtu in 2006 by Doug Currie of the Royal Ontario Museum identified 43 species, nearly doubling the previous estimate of 22 species for the region.

Black flies need running water, like rivers and streams, to develop from eggs to pupa. Only female black flies bite. Some species do not have males, and if they exist, they are rarely observed. Most black flies will feed on nectar for energy; a blood meal is only used for egg development. Monitoring the types of black flies found and their reproductive success in a stream is routinely done to measure levels of freshwater contamination.

Horseflies and Deerflies

Horseflies and deerflies (Tabanidae) are large flies, usually brown to black, of which females obtain egg-forming meals by sucking blood from mammals and birds. Some species of horseflies do not require a blood-meal. Energy to survive is obtained from sugar in insect honeydew and nectar, hence they are also pollinators. Horseflies and deerflies are most active during warm days, especially when the wind is low.

Deerflies are a kind of smaller horsefly with banded wings (Genus *Chrysops*). Horseflies can cause so much pain to humans when they bite that people call these flies "bulldogs".

Monitoring the distribution of horseflies and deerflies is important as they are potential vectors of some diseases in wildlife, such as tularaemia and encephalitis. Still, many aspects of the biology of horseflies and deerflies remain unknown. Horseflies and deerflies are in such abundance in the North that they are a very important source of food for many birds, other insects, and many fish species.

Twenty-five species of horseflies and deerflies have been recorded in the NWT, mostly in the forested areas. None are present yet on the Arctic islands.

Dr. Regula Waeckerlin
Faculty of Veterinary Medicine
Universtiy of Calgary

Dr. Brett Elkin
Wildlife Heath, GNWT

List 12. Selected Biting Insects

There are 34 species of mosquitoes, 58 species of black flies, and 25 species of deerflies and horseflies confirmed present in the NWT. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Wood et al. 1979 for mosquitoes, Teskey 1990 for deerflies and horseflies, and Adler et al. 2004 for blackflies. Mosquitoes, deerflies and horseflies common names are according to S. Carrière, black flies common names are according to P. Alder and D. Currie. Common names, as of 2010, have not been approved by the Entomological Society of Canada.

■ Treeline Mosquito Photo Credit: R Gau

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[c]
Diptera – Culicidae				Fly-like insects – Mosquitoes
Ash-coloured Mosquito	*Aedes cinereus*	Secure		
Night Vexing Mosquito	*Aedes vexans*	Undetermined		
Malaria Mosquito	*Anopheles earlei*	Undetermined		
Perturbing Dusk Mosquito	*Coquillettidia perturbans*	Undetermined		
Western Vector Mosquito	*Culex tarsalis*	Secure		
Frog Vector Mosquito	*Culex territans*	Secure		
Alaska Winter Mosquito	*Culiseta alaskaensis*	Secure		
Impatient Winter Mosquito	*Culiseta impatiens*	Secure		
Fraser Winter Mosquito	*Culiseta incidens*	Secure		
Marsh Winter Mosquito	*Culiseta incrnata*	Secure		
Swamp Mosquito	*Culiseta morsitans*	Secure		
Variable Mosquito	*Ochleroptatus excrucians*	Secure		
Grass Mosquito	*Ochlerotatus campestris*	Undetermined	L	
Canada Mosquito	*Ochlerotatus canadensis*	Secure		
Snowmelt Mosquito	*Ochlerotatus cataphylla*	Secure		
Common Mosquito	*Ochlerotatus communis*	Secure		
Crouching Sphagnum Mosquito	*Ochlerotatus dectitus*	Undetermined		
Spring Pool Mosquito	*Ochlerotatus diantaeus*	Secure		
Prairie Halophilic Mosquito	*Ochlerotatus dorsalis*	Undetermined		
Marsh Mosquito	*Ochlerotatus euedes*	Secure		
Aspen Mosquito	*Ochlerotatus fitchii*	Undetermined		
Large Yellow Mosquito	*Ochlerotatus flavescens*	Undetermined		
Treeline Mosquito	*Ochlerotatus hexodontus*	Secure		
Tundra Mosquito	*Ochlerotatus impiger*	Secure		
Spring Willow Mosquito	*Ochlerotatus implicatus*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[c]
Intrusive Mosquito	*Ochlerotatus intrudens*	Undetermined		
Spring Mosquito	*Ochlerotatus mercurator*	Undetermined		
Arctic Mosquito	*Ochlerotatus nigripes*	Secure		
Boreal Benign Mosquito	*Ochlerotatus pionips*	Secure		
Forest Mosquito	*Ochlerotatus provocans*	Undetermined		
Alpine Mosquito	*Ochlerotatus pullatus*	Undetermined	L	
Boreal Pesky Mosquito	*Ochlerotatus punctor*	Undetermined		
River Mosquito	*Ochlerotatus riparius*	Undetermined		
Winnipeg Mosquito	*Ochlerotatus spencerii*	Undetermined	L	
Diptera – Simuliidae				**Fly-like insects – Blackflies**
Hermit Black Fly	*Cnephia eremites*	Secure		
Nearly Hidden Black Fly	*Greniera abditoides*	Undetermined		
Big-eyed Black Fly	*Gymnopais holopticoides*	Sensitive		
Alpine Black Fly	*Helodon alpestris*	Secure		
Ten-articled Black Fly	*Helodon decemarticulatus*	Secure		
Gibson's Black Fly	*Helodon gibsoni*	Secure		
Irkutsk Black Fly	*Helodon irkutensis*	Secure		
Polar Black Fly	*Metacnephia borealis*	Secure		
Sailer's Black Fly	*Metacnephia saileri*	Secure		
Saskatchewan Black Fly	*Metacnephia saskatchewana*	Secure		
Bear Island Black Fly	*Prosimulium ursinum*	Secure		
Duck Black Fly	*Simulium anatinum*	Secure		
Ringed Black Fly	*Simulium annulus*	Secure		
Argus Mountain Black Fly	*Simulium argus*	Undetermined		
Baffin Island Black Fly	*Simulium baffinense*	Secure		
Two-horned Black Fly	*Simulium bicorne*	Secure		
Bracted Black Fly	*Simulium bracteatum*	Secure		
Turkey Black Fly	*Simulium congareenarum*	Secure		
Conundrum Black Fly	*Simulium conundrum*	Secure		
Craig's Black Fly	*Simulium craigi*	Secure		
Croxton's Black Fly	*Simulium croxtoni*	Secure		
Taiga Black Fly	*Simulium decimatum*	Secure		
Decorous Black Fly	*Simulium decorum*	Secure		
Excised Black Fly	*Simulium excisum*	Undetermined		
Exiled Black Fly	*Simulium exulatum*	Secure		
Fiona's Black Fly	*Simulium fionae*	Undetermined		
Little Spring Black Fly	*Simulium fontinale*	Secure		
Forked Black Fly	*Simulium furculatum*	Secure		

6.12 Selected Biting Insects

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[c]
Blameless Black Fly	*Simulium innocens*	Undetermined		
Irritating Black Fly	*Simulium irritatum*	Secure		
Lugger's Gnat	*Simulium luggeri*	Secure		
Malyschev's Black Fly	*Simulium malyschevi*	Secure		
Turkey Gnat	*Simulium meridionale*	Undetermined	L	
Murmansk Black Fly	*Simulium murmanum*	Secure		
Outflow Black Fly	*Simulium noelleri*	Secure		
Variegated Black Fly	*Simulium pictipes*	Secure		
Fine-haired Black Fly	*Simulium pilosum*	Secure		
Rendalen Black Fly	*Simulium rendalense*	Undetermined		
Beaked Black Fly	*Simulium rostatum*	Secure		
Rubtzov's Black Fly	*Simulium rubtzovi*	Undetermined		
Ruggle's Black Fly	*Simulium rugglesi*	Secure		
Woodland Black Fly	*Simulium silvestre*	Secure		
Tundra Black Fly	*Simulium subpusillum*	Secure		
Barren Grounds Black Fly	*Simulium tormentor*	Secure		
Broad Legged Black Fly	*Simulium transiens*	Secure		
Three-pointed Black Fly	*Simulium tribulatum*	Secure		
Short Black Fly	*Simulium truncatum*	Secure		
Tubercled Black Fly AB	*Simulium tuberosum*	Secure		
Vampire Black Fly	*Simulium vampirum*	Secure		
Little Thief Black Fly	*Simulium vandalicum*	Secure		
White-stockinged Black Fly	*Simulium venustum*	Secure		
Unassuming Black Fly	*Simulium verecundum*	Secure		
Injuring Black Fly	*Simulium violator*	Secure		
Striped Black Fly	*Simulium vittatum*	Secure		
Common Black Fly	*Simulium vulgare*	Secure		
Ten-filamented Black Fly (Beringian Blackfly)	*Stegopterna decafilis*	Undetermined		
Emerging Black Fly	*Stegopterna emergens*	Secure		
Tricorne Black Fly	*Stegopterna trigonium*	Secure		
Diptera – Tabanidae				**Fly-like insects – Deerflies and Horseflies**
Fen Horse Fly	*Atylotus sublunatocornis*	Secure		
Malicious Deer Fly	*Chrysops ater*	Secure		
Dawson's Deer Fly	*Chrysops dawsoni*	Undetermined		
Agitated Deer Fly	*Chrysops excitans*	Secure		
Coldregion Deer Fly	*Chrysops frigidus*	Undetermined	L	
Hairy Deer Fly	*Chrysops furcatus*	Secure		
Benign Deer Fly	*Chrysops mitis*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[c]
Black Deer Fly	*Chrysops nigripes*	Secure		
North American Horse Fly	*Haematopota americana*	Undetermined		
Pesky Horse Fly	*Hybomitra affinis*	Secure		
Hilltop Horse Fly	*Hybomitra arpadi*	Secure		
Astute Horse Fly	*Hybomitra astuta*	Secure		
Epistate Horse Fly	*Hybomitra epistates*	Secure		
Fearsome Horse Fly	*Hybomitra frontalis*	Secure		
Hearle's Horse Fly	*Hybomitra hearlei*	Undetermined	L	
Bog Horse Fly	*Hybomitra illota*	Secure		
Orange-sided Horse Fly	*Hybomitra lasiophthalma*	Secure		
Brown-legged Horse Fly	*Hybomitra liorhina*	Secure		
Sphagnum Horse Fly	*Hybomitra lurida*	Secure		
Rock Horse Fly	*Hybomitra nitidifrons*	Secure		
Pechuman's Horse Fly	*Hybomitra pechumani*	Secure		
Northwestern Horse Fly	*Hybomitra sexfasciata*	Secure		
Western Horse Fly	*Hybomitra tetrica*	Undetermined	L	
Coniferous Horse Fly	*Hybomitra trepida*	Secure		
Zonalis Horse Fly	*Hybomitra zonalis*	Secure		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

6.12 Grasshoppers and Katydid

Cracker Grasshopper
Photo Credit: PM Catling

Grasshoppers, crickets- katydids are closely related to cockroaches, mantids, termites, rock-crawlers (also called grylloblattids), earwigs and stick insects. Grasshoppers (Order Orthoptera) have shorter antenna than crickets and katydids (also called bush-crickets) (Order Grylloptera).

Grasshoppers are important in the North in many ways. First, they often occur in large numbers and have substantial impact on plant communities. They may eat their weight in plant tissue each day, and can influence the composition of plant communities. They also hasten the degradation of cellulose and contribute in a significant way to the cycling of nutrients in ecosystems.

Second, many bird species feed on grasshoppers. Also reptiles and amphibians are major consumers. Some birds and mammals probably rely heavily on grasshoppers whereas others simply take advantage of periodic large numbers. Sandhill cranes feed on the relatively large striped sedge grasshopper (*Stethophyma lineata*) in fens and on clear-winged grasshopper (*Camnula pellucida*) along roads (...and regularly at Hay River airfield). Grasshoppers are 50-75% crude protein and thus highly nutritious.

Third, they can be useful indicators of environmental change. The diversity, functional importance, sensitivity to disturbance, ease of identification and ease of sampling make grasshoppers potentially useful bioindicators for land management. Grasshopper assemblages have been shown to respond to disturbances associated with human land use and their responses may add to information from other groups such as plants.

Many grasshoppers have complex behaviour patterns, both auditory and visual. The chirping or whistling-like sounds that they make can often be used to identify the species. These sounds are made by rubbing one part of the body against another and are referred to as stridulation.

The greatest variety of grasshoppers in NWT is found in dry or moist open places dominated by grasses or sedges but with high floristic diversity. Such habitats occur beside streams and lakeshores and along roads. However, grasshoppers can occur in all habitats. The tundra grasshopper (*Bohemanella frigida*) and the Arctic grasshopper (*Aeropedellus arcticus*) are abundant in rich, limestone tundra. Our only bush-cricket or katydid (*Metrioptera sphagnorum*) occurs in sphagnum bogs near Fort Smith.

The last glaciation greatly influenced the present distribution of grasshoppers in the NWT. Most species present here are widespread and abundant across most of southern Canada. Some likely followed the receding ice-sheet northward into Canada from an extensive range to the south.

Three species, Kennicott's grasshopper (*Melanoplus kennicottii*), speckled rangeland grasshopper (*Arphia conspersa*) and club-horned grasshopper (*Aeropedellus clavatus*) are mainly distributed in the prairies but are also present in isolated prairie remnants within the taiga-boreal forest of the NWT.

A particularly interesting pattern is demonstrated by a few species of grasshoppers in the NWT. This is the Beringia distribution associated with the unglaciated area of Alaska, Yukon and Northwest Territories. Beringia was largely treeless steppe tundra surrounded by glaciers. Here life survived when the rest of Canada was under glacial ice. The Beringian biodiversity spread south and east as the icesheet melted but the rate of dispersal varied for different grasshoppers. Some species were confined by habitat requirements while others were restricted by lack of mobility due to being flightless. Those that could not spread rapidly into recently deglaciated landscapes across Canada remained in the relict Beringian habitats outlining the approximate extent of the Beringian region. Included in this flightless Beringian category are the tundra grasshopper (*Bohemanella frigida*), and Arctic grasshopper (*Aeropedellus arcticus*).

The third Beringian species, Brook's pink-shanked grasshopper (*Xanthippus brooksi*), is certainly one of the most interesting grasshoppers in the NWT and one that deserves much more study. Although a few individuals have been collected elsewhere in the Yukon and NWT, typical specimens of this species have been found only near Inuvik. So in a strict sense, it is a grasshopper unique to a very small area of the NWT. It probably lived in Beringia and as conditions changed as boreal forest invaded and many of the larger Beringian mammals disappeared, there is evidence that some of the resident insects survived in relict pockets of tundra grassland, dunes and rocky slopes. Brook's pink-shanked grasshopper appears to be one of them. This species is the only grasshopper in the NWT ranked as "May Be At Risk".

Anyone wanting more information on grasshoppers can obtain it from the Orthopterists' Society (**www.orthoptera.org**). Questions and local information about grasshoppers in the NWT can be sent to NWTBUGS@gov.nt.ca.

Dr. Paul Catling
Agriculture and Agri-Food Canada

"Insects have been documented at many locations near roads and communities in NWT, but in the vast expanse beyond settlement it is possible to discover species not previously found in the territory, or that are even new to science. Air transportation has vastly improved knowledge of biodiversity in the North. In 2007 I collected plants and insects during a cooperative study of a remote Sahtu region of unusual limestone terrain."

– Dr. Paul Catling

List 13. Grasshoppers and Katydid

There are 22 species of grasshoppers confirmed present in the NWT. Only one species of katydid (bush-crickets) has been recorded in the NWT. None are of global conservation concern. Species are listed alphabetically according to scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Vickery and Kevan 1985. Common names are from Catling 2008.

■ Tundra Grasshopper Photo Credit: PM Catling

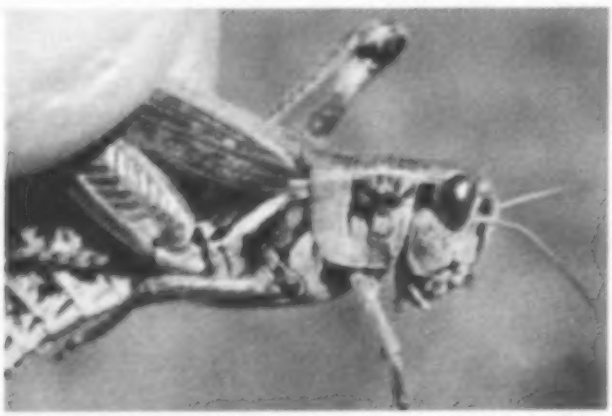
Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Grylloptera – Tettigoniidae		**Cricket-like insects – Bush-crickets or Katydids**		
Bog Katydid	*Metriaptera sphagnorum*	Undetermined	L	
Orthoptera – Acrididae		**Grasshopper-like insects – Short-horned Grasshoppers**		
Arctic Grasshopper	*Aeropedellus arcticus*	Secure		
Club-horned Grasshopper	*Aeropedellus clavatus*	Undetermined		
Speckled Rangeland Grasshopper	*Arphia conspersa*	Secure		
Tundra Grasshopper	*Bohemanella frigida*	Sensitive		
Clear-winged Grasshopper	*Camnula pellucida* [c]	Secure		
Cow Grasshopper	*Chloealtis abdominalis*	Secure		
Sprinkled Broad-winged Grasshopper	*Chloealtis conspersa*	Undetermined	L	
Marsh Meadow Grasshopper	*Chorthippus curtipennis*	Undetermined		
Northern Grasshopper	*Melanoplus borealis*	Secure		
Bruner's Grasshopper	*Melanoplus bruneri*	Secure		
Huckleberry Grasshopper	*Melanoplus fasciatus*	Secure		
Redlegged Grasshopper	*Melanoplus femurrubrum* [c]	Secure		
Kennicott's Grasshopper	*Melanoplus kennicottii*	Sensitive		
Migratory Grasshopper	*Melanoplus sanguinipes*	Secure		
Coral-winged grasshopper	*Pardalophora apiculata*	Secure		
Graceful Sedge Grasshopper	*Stethophyma gracile*	Undetermined	L	
Striped Sedge Grasshopper	*Stethophyma lineata*	Undetermined		
Cracker Grasshopper	*Trimerotropis verruculata*	Secure		
Brook's Pink-shanked Grasshopper	*Xanthippus brooksi*	May Be At Risk		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Orthoptera – Tetrigidae		Grasshopper-like insects – Grouse Grasshoppers		
Brunner's Grouse Grasshopper	*Tetrix brunnerii*	Secure		
Ornate Grouse Grasshopper	*Tetrix ornata*	Secure		
Granulated Grouse Grasshopper	*Tetrix subulata*	Secure		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

c *Camnula pellucida* and *Melanoplus femurrubrum* may be introduced. They are native to North America, but occur mainly in man-made habitats.



■ Northern Grasshopper Photo Credit: PM Catling

■ Cow Grasshopper Photo Credit: PM Catling

■ Northern Grasshopper Photo Credit: PM Catling

■ Striped Sedge Grasshopper Photo Credit: PM Catling

6.14 Spiders

■ Snowbank Wolf Spider
Photo Credit: J Shan

Spiders (Araneae) belong to the arthronod class Arachnida (a word derived from the Greek term for "spider") along with scorpions, harvestmen, mites, ticks, whipscorpions and other familiar and not-so-familiar organisms. Arachnids have eight legs, a two-part body, and no antennae. In contrast, insects have six legs, a three-part body, and antennae. All spiders have fang-like mouthparts (chelicerae) and most have four pairs of eyes. Spiders are unique in their possession of abdominal spinnerets and, in males, pedipalps (leg-like appendages at the front of a spider) that are extensively modified for mating purposes.

Spiders are common but often inconspicuous animals in all terrestrial and many aquatic ecosystems around the world (except Antarctica). They are excellent predators, primarily eating insects and other arthropods. Most are generalists, preying upon a wide variety of organisms. Only a few are specialists. Some actively hunt down their prey, others wait for prey to come to them and then capture them in elaborate webs or simply by ambushing and overpowering them. Spiders form the seventh largest order of organisms on the planet (and the largest entirely predatory one) and are key components of all ecosystems where they occur.

All spiders use silk produced from their spinnerets for various purposes: from safety lines and egg sacs, to prey-capture webs. To most people, webs are probably the most familiar aspects of spiders. Many spiders, however, do not build webs. Spiders that ambush or actively hunt their prey (e.g., crab, jumping, wolf, ground, and sac spiders,) do not build prey-capture webs. Among web-building spiders, species grouped within the same *Family* usually construct similar types of webs (e.g., funnel-web, orb, sheet-web, and cobweb weavers). Spider webs vary widely in size, shape, and the amount and type of silk used.

Most Nearctic spider species take one to two years to complete their life cycles and, in the NWT, few live for more than one year. Almost all spiders are solitary animals. Because of this, spiders have evolved complex courtship rituals so that males and females of the same species can mate successfully... without eating each other.

Many Nearctic spiders spend the winter either as eggs (e.g., many orb weavers) or as sub-adults (e.g., many wolf and crab spiders). Sub-adult *Pardosa* wolf spiders are often one of the first signs of spring, emerging from their winter hiding places and running about in open areas, often in large numbers, on the first reasonably warm days. They mature rapidly and mate in the first weeks of spring. Shortly thereafter the females can be found dragging egg cases behind them, attached to their spinnerets, or with young spiderlings riding on their backs. Although few spiders are known to care for their young, this type of maternal care is typical of wolf spiders.

Most of the known NWT spiders are widespread, relatively common Nearctic species. Nearly 10%, however, are restricted to the Arctic. Spider diversity is much higher in the tropics and, interestingly, in the southern hemisphere than it is in the northern hemisphere. The diversity of one spider *Family*, Linyphiidae (sheet-web weavers and dwarf spiders), however, reverses this trend and is highest in the North. Thus, it is not surprising that nearly half of the known NWT spider species are linyphiids and at least 17 of these are only found in the Arctic.

There has been no concerted effort to document the full range of NWT spider diversity and most records are from incidental captures by insect collectors working in relatively accessible areas. Careful collecting, targeting especially the many small, inconspicuous ground- dwelling species, will no doubt add a considerable number of new records to the NWT spider species list.

Robb Bennett
Arachnid specialist living in British Columbia

List 14. Spiders

So far, 268 species of spiders are confirmed present in the NWT. None are of global conservation concern. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Platnick 2010 and Paquin et al. 2010. Common names are from diverse sources or original for this document and have not been approved by the Entomological Society of Canada.

■ Taiga Wolf Spider — Photo Credit: B Latham

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Araneae – Agelenidae				**Spiders – Funnel-web Weaver Spiders**
Utah Funnel-web Spider	*Agelenopsis utahana*	Undetermined		
Araneae – Amaurobiidae				**Spiders – Amaurobiid Spiders**
Common Amaurobiid Spider	*Arctobius agelenoides*	Undetermined		
Debris Amaurobiid Spider	*Cybaeopsis eupia*	Undetermined		
Araneae – Araneidae				**Spiders – Orb Weavers**
Rock Orb Weaver	*Aculepeira carbonarioides*	Secure		
Northern Orb Weaver	*Aculepeira packardi*	Undetermined		
Roundshouldered Orb Weaver	*Araneus corticarius*	Undetermined	L	
Marbled Orb Weaver	*Araneus marmoreus*	Undetermined		
Nordmann's Orb Weaver	*Araneus nordmanni*	Undetermined	L	
Fierce Orb Weaver	*Araneus saevus*	Undetermined	L	
Shamrock Orb Weaver	*Araneus trifolium*	Undetermined		
Yukon Orb Weaver	*Araneus yukon*	Undetermined	L	
Six-spotted Orb Weaver	*Araniella displicata*	Secure		
Boreal Orb Weaver	*Araniella proxima*	Undetermined		
Deathstring Orb Weaver	*Cyclosa conica*	Undetermined	L	
Greenland Orb Weaver	*Hypsosinga groenlandica*	Undetermined		
Small Orb Weaver	*Hypsosinga pygmaea*	Undetermined		
Rubens Orb Weaver	*Hypsosinga rubens*	Undetermined		
Horned Orb Weaver	*Larinioides cornutus*	Secure		
Bordered Orb Weaver	*Larinioides patagiatus*	Secure		
Araneae – Clubionidae				**Spiders – Sac Spiders**
Bryant Sac Spider	*Clubiona bryantae*	Undetermined		
Canada Sac Spider	*Clubiona canadensis*	Undetermined		
Boreal Sac Spider	*Clubiona furcata*	Undetermined		
Kulczynski's Sac Spider	*Clubiona kulczynskii*	Undetermined		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Norway Sac Spider	*Clubiona norvegica*	Secure		
Alpine Sac Spider	*Clubiona praematura*	Undetermined		
Bank Sac Spider	*Clubiona riparia*	Undetermined		
Araneae – Dictynidae				**Spiders – Dictynid Spiders**
Lapland Dictynid Spider	*Arctella lapponica*	Undetermined		
Alaska Dictynid Spider	*Dictyna alaskae*	Undetermined		
Reed Dictynid Spider	*Dictyna arundinacea*	Undetermined		
Short Dictynid Spider	*Dictyna brevitarsa*	Undetermined		
Major Dictynid Spider	*Dictyna major*	Undetermined		
Hackled-banded Dictynid Spider	*Emblyna annulipes*	Undetermined		
High Arctic Dictynid Spider	*Emblyna borealis*	Undetermined		
Manitoba Dictynid Spider	*Emblyna manitoba*	Undetermined		
Araneae – Gnaphosidae				**Spiders – Ground Spiders**
Pluto Ground Hunter	*Callilepis pluto*	Undetermined		
Neglected Ground Hunter	*Drassodes neglectus*	Undetermined		
Boreal Ground Hunter	*Gnaphosa borea*	Undetermined		
Brown Ground Hunter	*Gnaphosa brumalis*	Undetermined		
Forest Ground Hunter	*Gnaphosa microps*	Undetermined		
Moss Ground Hunter	*Gnaphosa muscorum*	Undetermined		
High Arctic Ground Hunter	*Gnaphosa orites*	Undetermined		
Bog Ground Hunter	*Gnaphosa parvula*	Undetermined		
Winter Ground Hunter	*Haplodrassus hiemalis*	Secure		
Taiga Ground Hunter	*Micaria aenea*	Undetermined	L	
Alpine Ground Hunter	*Micaria alpina*	Undetermined		
Tundra Ground Hunter	*Micaria constricta*	Undetermined	L	
Ant-like Ground Hunter	*Micaria pulicaria*	Secure		
Reddish Ground Hunter	*Micaria rossica*	Undetermined		
Three-spot Ground Hunter	*Micaria tripunctata*	Undetermined	L	
Canada Ground Hunter	*Orodrassus canadensis*	Undetermined	L	
Fratris Ground Hunter	*Zelotes fratris*	Undetermined		
Puritan Ground Hunter	*Zelotes puritanus*	Undetermined		
Sula Ground Hunter	*Zelotes sula*	Undetermined		
Araneae – Hahniidae				**Spiders – Hahniid Spiders**
Hahniid Spider	*Hahnia ononidum*	Undetermined		
Agile Hahniid Spider	*Neoantistea agilis*	Undetermined		
Araneae – Linyphiidae				**Spiders – Sheet-web Weavers and Dwarf Weavers**
Olive Sheet-web Weaver	*Agyneta olivacea*	Undetermined		
Simple Sheet-web Weaver	*Agyneta simplex*	Undetermined		

6.14 Spiders

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Lace Sheet-web Weaver	*Allomengea dentisetis*	Undetermined		
Multifront Sheet-web Weaver	*Arcterigone pilifrons*	Undetermined		
Kulczynski's Sheet-web Weaver	*Baryphyma kulczynskii*	Undetermined		
Threefront Sheet-web Weaver	*Baryphyma trifrons*	Undetermined		
Grey Sheet-web Weaver	*Bathyphantes brevipes*	Undetermined		
Short Sheet-web Weaver	*Bathyphantes brevis*	Undetermined		
Canada Sheet-web Weaver	*Bathyphantes canadensis*	Undetermined		
Northern Sheet-web Weaver	*Bathyphantes gulkana*	Undetermined		
Pale Sheet-web Weaver	*Bathyphantes pallidus*	Undetermined		
Reprobus Sheet-web Weaver	*Bathyphantes reprobus*	Undetermined		
Rockpile Sheet-web Weaver	*Bathyphantes simillimus*	Undetermined		
Bulb Sheet-web Weaver	*Ceraticelus bulbosus*	Undetermined		
Alaska Sheet-web Weaver	*Ceratinella alaskana*	Undetermined		
Dark Sheet-web Weaver	*Cnephalocotes obscurus*	Undetermined		
Bident Sheet-web Weaver	*Diplocentria bidentata*	Undetermined		
Perplexing Sheet-web Weaver	*Diplocentria perplexa*	Undetermined		
Rectangular Sheet-web Weaver	*Diplocentria rectangulata*	Undetermined		
Bearded Sheet-web Weaver	*Diplocephalus barbiger*	Undetermined		
Sphagnum Sheet-web Weaver	*Diplocephalus sphagnicola*	Undetermined		
Shortnosed Sheet-web Weaver	*Diplocephalus subrostratus*	Undetermined		
Conifer Sheet-web Weaver	*Dismodicus alticeps*	Undetermined		
Tenspotted Sheet-web Weaver	*Dismodicus decemoculatus*	Undetermined		
Miller Dwarf Weaver	*Erigone aletris*	Undetermined		
Alsaida Dwarf Weaver	*Erigone alsaida*	Undetermined		
Arctic Dwarf Weaver	*Erigone arctica*	Undetermined		
Subarctic Dwarf Weaver	*Erigone arctophylacis*	Undetermined		
Post Dwarf Weaver	*Erigone atra*	Undetermined		
Blazed Dwarf Weaver	*Erigone blaesa*	Undetermined		
Teethed Dwarf Weaver	*Erigone dentigera*	Undetermined		
Fjaeldmark Dwarf Weaver	*Erigone psychrophila*	Undetermined		
Tirol Dwarf Weaver	*Erigone tirolensis*	Undetermined		
Whymper's Dwarf Weaver	*Erigone whymperi*	Undetermined		
Zographica Dwarf Weaver	*Erigone zographica*	Undetermined		
Bark Sheet-web Weaver	*Estrandia grandaeva*	Undetermined		
Scopulifer Sheet-web Weaver	*Glyphesis scopulifer*	Undetermined		
Park Sheet-web Weaver	*Gnathonarium famelicum*	Undetermined		
Sunshine Sheet-web Weaver	*Gonatium crassipalpum*	Undetermined		
Spruce Sheet-web Weaver	*Grammonota angusta*	Undetermined		
Big Sheet-web Weaver	*Grammonota gigas*	Undetermined		
Stripe Sheet-web Weaver	*Grammonota vittata*	Undetermined		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Holmgren's Sheet-web Weaver	*Halorates holmgrenii*	Undetermined		
Spitsbergen Sheet-web Weaver	*Halorates spetsbergensis*	Undetermined		
Thule Sheet-web Weaver	*Halorates thulensis*	Undetermined		
Marked Sheet-web Weaver	*Helophora insignis*	Undetermined		
Gibbosa Sheet-web Weaver	*Hilaira gibbosa*	Undetermined		
Oldgrowth Sheet-web Weaver	*Hilaira herniosa*	Undetermined		
Esquimo Sheet-web Weaver	*Hilaira incondita*	Undetermined		
Ice Sheet-web Weaver	*Hilaira proletaria*	Undetermined		
Snow Sheet-web Weaver	*Hilaira vexatrix*	Undetermined		
Fourcrested Sheet-web Weaver	*Horcotes quadricristatus*	Undetermined		
Eagle Sheet-web Weaver	*Hybauchenidium aquilonare*	Undetermined		
Northwestern Sheet-web Weaver	*Hybauchenidium gibbosum*	Undetermined		
Norland Sheet-web Weaver	*Hypomma norlandicum*	Undetermined		
Subarctic Sheet-web Weaver	*Hypomma subarcticum*	Undetermined		
Peatland Sheet-web Weaver	*Hypselistes florens*	Undetermined		
Island Sheet-web Weaver	*Islandiana falsifica*	Undetermined		
Kamchatka Sheet-web Weaver	*Kaestneria anceps*	Undetermined		
Bog Sheet-web Weaver	*Kaestneria pullata*	Undetermined		
Alpine Sheet-web Weaver	*Lepthyphantes alpinus*	Undetermined		
Duplicate Sheet-web Weaver	*Lepthyphantes duplicatus*	Undetermined		
Washington Sheet-web Weaver	*Lepthyphantes washingtoni*	Undetermined		
Macrargus Sheet-web Weaver	*Macrargus multesimus*	Undetermined		
Masikia Sheet-web Weaver	*Masikia indistincta*	Undetermined		
Sundevall's Sheet-web Weaver	*Maso sundevalli*	Undetermined		
Boreal Sheet-web Weaver	*Mecynargus borealis*	Undetermined		
Hill Sheet-web Weaver	*Mecynargus monticola*	Undetermined		
Lowarctic Sheet-web Weaver	*Mecynargus paetulus*	Undetermined		
Moss Sheet-web Weaver	*Mecynargus sphagnicola*	Undetermined		
Trilobate Sheet-web Weaver	*Mermessus trilobata*	Undetermined		
Undulating Sheet-web Weaver	*Mermessus undulata*	Undetermined		
Projecting Sheet-web Weaver	*Metopobactrus prominulus*	Undetermined		
Foliage Sheet-web Weaver	*Microlinyphia pusilla*	Undetermined		
Radiate Sheet-web Weaver	*Neriene radiata*	Undetermined		
Beringia Sheet-web Weaver	*Oreoneta beringiana*	Undetermined		
Brown Sheet-web Weaver	*Oreoneta brunnea*	Undetermined		
Eskimo Point Sheet-web Weaver	*Oreoneta eskimopoint*	Undetermined		
Herschel Sheet-web Weaver	*Oreoneta herschel*	Undetermined		
Siberian Sheet-web Weaver	*Oreoneta leviceps*	Undetermined		
Coldlover Sheet-web Weaver	*Oreoneta magaputo*	Undetermined		
Undergrowth Sheet-web Weaver	*Oreonetides vaginatus*	Undetermined		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Menge's Sheet-web Weaver	*Pelecopsis mengei*	Undetermined		
Travelling Sheet-web Weaver	*Perregrinus deformis*	Undetermined		
Polar Sheet-web Weaver	*Perro polaris*	Undetermined		
Taiga Sheet-web Weaver	*Pityohyphantes subarcticus*	Undetermined		
American Sheet-web Weaver	*Pocadicnemis americana*	Undetermined		
Russian Sheet-web Weaver	*Poeciloneta vakkhanka*	Undetermined		
Gertsch' s Sheet-web Weaver	*Satilatlas gertschi*	Undetermined		
Dubius Sheet-web Weaver	*Sciastes dubius*	Undetermined		
Spearshaped Sheet-web Weaver	*Sciastes hastatus*	Undetermined		
Truncated Sheet-web Weaver	*Sciastes truncatus*	Undetermined		
Mountain Sheet-web Weaver	*Scotinotylus alpinus*	Undetermined		
Sacred Sheet-web Weaver	*Scotinotylus sacer*	Undetermined		
Marsh Sheet-web Weaver	*Scyletria inflata*	Undetermined		
Yukon Sheet-web Weaver	*Semljicola beringianus*	Undetermined		
Lapland Sheet-web Weaver	*Semljicola lapponicus*	Undetermined		
Short Sheet-web Weaver	*Semljicola obtusus*	Undetermined		
Pampia Sheet-web Weaver	*Silometopoides pampia*	Undetermined		
Montane Sheet-web Weaver	*Sisicottus montanus*	Undetermined		
Tibias Sheet-web Weaver	*Souidas tibialis*	Undetermined		
Blauvelt Sheet-web Weaver	*Stemonyphantes blauveltae*	Undetermined		
Styloctetor Sheet-web Weaver	*Styloctetor stativus*	Undetermined		
Doubleridged Sheet-web Weaver	*Tapinocyba bicarinata*	Undetermined		
Matanusk Sheet-web Weaver	*Tapinocyba matanuskae*	Undetermined		
Minute Sheet-web Weaver	*Tapinocyba minuta*	Undetermined		
Small Sheet-web Weaver	*Tapinocyba parva*	Undetermined		
Latithorax Sheet-web Weaver	*Tarsiphantes latithorax*	Undetermined		
Ornate Sheet-web Weaver	*Tmeticus ornatus*	Undetermined		
Pygmy Sheet-web Weaver	*Typhochrestus pygmaeus*	Undetermined		
Thorax Sheet-web Weaver	*Vermontia thoracica*	Undetermined		
Wabasso Sheet-web Weaver	*Wabasso cacuminatus*	Undetermined		
Arctic Sheet-web Weaver	*Walckenaeria arctica*	Undetermined		
Woods Sheet-web Weaver	*Walckenaeria atrotibialis*	Undetermined		
Auranticeps Sheet-web Weaver	*Walckenaeria auranticeps*	Undetermined		
Peatland Sheet-web Weaver	*Walckenaeria castanea*	Undetermined		
Tundra Sheet-web Weaver	*Walckenaeria clavicornis*	Undetermined		
Common Sheet-web Weaver	*Walckenaeria communis*	Undetermined		
Tiny Sheet-web Weaver	*Walckenaeria exigua*	Undetermined		
Karpinski's Sheet-web Weaver	*Walckenaeria karpinskii*	Undetermined		
Fir Sheet-web Weaver	*Walckenaeria lepida*	Undetermined		
Spiral Sheet-web Weaver	*Walckenaeria subspiralis*	Undetermined		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Tricorne Sheet-web Weaver	*Walckenaeria tricornis*	Undetermined		
Armed Sheet-web Weaver	*Zornella armata*	Undetermined		
Araneae – Liocranidae				**Spiders – Liocranid Spiders**
Ornate Liocranid Spider	*Agroeca ornata*	Undetermined		
Araneae – Lycosidae				**Spiders – Wolf Spiders**
Spinyrib Wolf Spider	*Alopecosa aculeata*	Secure		
Ellesmere Wolf Spider	*Alopecosa exasperans*	Undetermined		
Hairyleg Wolf Spider	*Alopecosa hirtipes*	Secure		
Painted Wolf Spider	*Alopecosa pictilis*	Secure		
Hilltop Wolf Spider	*Arctosa alpigena*	Secure		
Marked Wolf Spider	*Arctosa insignita*	Undetermined	L	
Raptor Wolf Spider	*Arctosa raptor*	Undetermined	L	
Redlined Wolf Spider	*Arctosa rubicunda*	Undetermined		
Whitedotted Wolf Spider	*Pardosa albomaculata*	Undetermined		
Nunavut Wolk Spider	*Pardosa algens*	Undetermined		
Thin-legged Wolf Spider	*Pardosa concinna*	Undetermined	L	
Treeline Wolf Spider	*Pardosa furcifera*	Undetermined		
Snowbank Wolf Spider	*Pardosa fuscula*	Secure		
Glacier Wolf Spider	*Pardosa glacialis*	Secure		
Greenland Wolf Spider	*Pardosa groenlandica*	Secure		
Taiga Wolf Spider	*Pardosa hyperborea*	Undetermined		
Lapland Wolf Spider	*Pardosa lapponica*	Secure		
Mackenzie Wolf Spider	*Pardosa mackenziana*	Secure		
Shiny Wolf Spider	*Pardosa moesta*	Undetermined		
Podhorski's Wolf Spider	*Pardosa podhorskii*	Undetermined		
Yukon Wolf Spider	*Pardosa prosaica*	Undetermined		
Friendly Wolf Spider	*Pardosa sodalis*	Undetermined		
Northern Wolf Spider	*Pardosa tesquorum*	Secure		
Boreal Wolf Spider	*Pardosa uintana*	Secure		
Forest Wolf Spider	*Pardosa xerampelina*	Secure		
Spruce Wolf Spider	*Pirata bryantae*	Undetermined	L	
Cantrall's Wolf Spider	*Pirata cantralli*	Undetermined	L	
Lonely Wolf Spider	*Pirata insularis*	Undetermined		
Pirate Wolf Spider	*Pirata piraticus*	Undetermined		
Turf Wolf Spider	*Trochosa terricola*	Undetermined	L	
Araneae – Philodromidae				**Spiders – Running Crab Spiders**
Alaskan Running Crab Spider	*Philodromus alascensis*	Undetermined		
Agile Running Crab Spider	*Philodromus cespitum*	Secure		
Blackspruce Running Crab Spider	*Philodromus mysticus*	Undetermined	L	

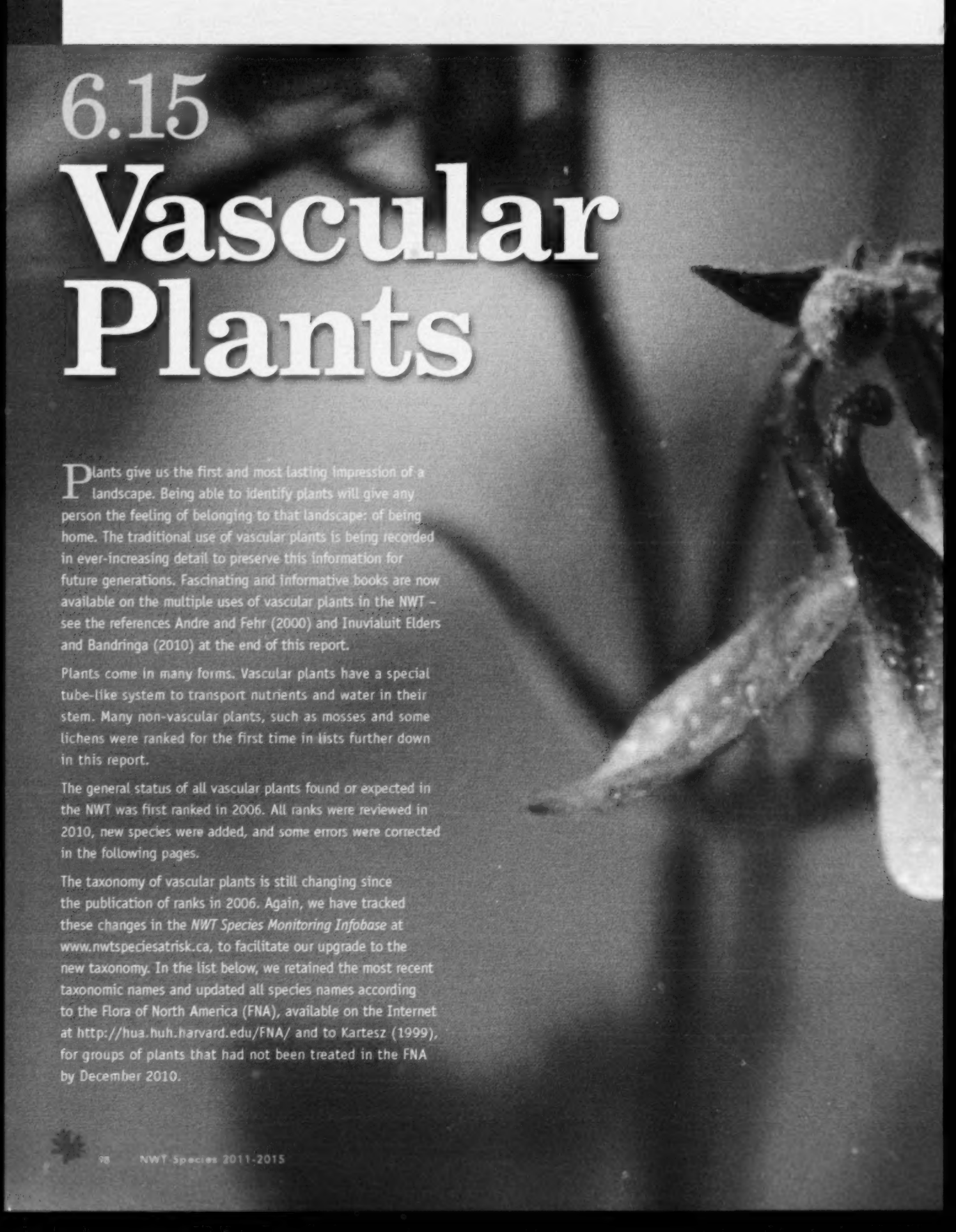
Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Slow Running Crab Spider	*Philodromus placidus*	Undetermined		
Red Running Crab Spider	*Philodromus rufus*	Secure		
Arctic Running Crab Spider	*Thanatus arcticus*	Undetermined		
Striped Running Crab Spider	*Thanatus striatus*	Undetermined		
Maritime Running Crab Spider	*Tibellus maritimus*	Secure		
Oblong Running Crab Spider	*Tibellus oblongus*	Undetermined		
Araneae – Pisauridae				**Spiders – Fishing Spiders**
Sixspotted Fishing Spider	*Dolomedes triton*	Undetermined		
Araneae – Salticidae				**Spiders – Jumping Spiders**
Blacknarked Jumping Spider	*Dendryphantes nigromaculatus*	Undetermined		
Bronze Jumping Spider	*Eris militaris*	Undetermined		
Proszynski's Jumping Spider	*Evarcha proszynskii*	Undetermined		
Yellowleg Jumping Spider	*Pelegrina flavipes*	Undetermined		
Mountain Jumping Spider	*Pelegrina montana*	Undetermined		
Boreal Jumping Spider	*Phidippus borealis*	Undetermined		
Johnson's Jumping Spider	*Phidippus johnsoni*	Undetermined		
Cutler's Jumping Spider	*Sitticus cutleri*	Undetermined		
Swamp Jumping Spider	*Sitticus palustris*	Undetermined		
Tundra Jumping Spider	*Sitticus ranieri*	Undetermined		
Minute Jumping Spider	*Talavera minuta*	Undetermined		
Araneae – Tetragnathidae				**Spiders – Longjawed Orb Weavers**
Clerck's Longjawed Orb Weaver	*Pachygnatha clerckii*	Secure		
Tailed Longjawed Orb Weaver	*Tetragnatha caudata*	Undetermined		
Dearmata Longjawed Orb Weaver	*Tetragnatha dearmata*	Undetermined	L	
Boreal Longjawed Orb Weaver	*Tetragnatha extensa*	Secure		
Shoshone Longjawed Orb Weaver	*Tetragnatha shoshone*	Undetermined	L	
Versicolor Longjawed Orb Weaver	*Tetragnatha versicolor*	Secure		
Araneae – Theridiidae				**Spiders – Cobweb Weavers**
Arctic Cobweb Weaver	*Arctachaea nordica*	Undetermined		
Brownblack Cobweb Weaver	*Crustulina sticta*	Undetermined		
Intrepid Cobweb Weaver	*Enoplognatha intrepida*	Undetermined		
Brown Cobweb Weaver	*Robertus fuscus*	Undetermined		
Whitemarked Cobweb Weaver	*Steatoda albomaculata*	Undetermined		
Boreal Cobweb Weaver	*Steatoda borealis*	Undetermined		
Different Cobweb Weaver	*Theridion differens*	Undetermined		
Forest Cobweb Weaver	*Theridion impressum*	Undetermined		
Ohlert's Cobweb Weaver	*Theridion ohlerti*	Undetermined		
Painted Cobweb Weaver	*Theridion pictum*	Undetermined		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Minnesota Cobweb Weaver	*Thymoites minnesota*	Undetermined		
Northern Cobweb Weaver	*Thymoites oleatus*	Undetermined		
Araneae – Thomisidae			**Spiders – Thomisid Crab Spiders**	
Brownlegged Crab Spider	*Coriarachne brunneipes*	Undetermined	L	
Utah Crab Spider	*Coriarachne utahensis*	Undetermined		
Goldenrod Crab Spider	*Misumena vatia*	Secure		
Arctic Crab Spider	*Ozyptila arctica*	Secure		
Gertsch's Crab Spider	*Ozyptila gertschi*	Undetermined		
Sincere Crab Spider	*Ozyptila sincera*	Undetermined		
Britcher's Crab Spider	*Xysticus britcheri*	Secure		
Canada Crab Spider	*Xysticus canadensis*	Undetermined	L	
Chippewan Crab Spider	*Xysticus chippewa*	Undetermined	L	
Shy Crab Spider	*Xysticus cunctator*	Undetermined		
Higharctic Crab Spider	*Xysticus deichmanni*	Secure		
Hard Crab Spider	*Xysticus durus*	Undetermined	L	
Ellipse Crab Spider	*Xysticus ellipticus*	Undetermined	L	
Emerton's Crab Spider	*Xysticus emertoni*	Secure		
Wild Crab Spider	*Xysticus ferox*	Undetermined		
Mournful Crab Spider	*Xysticus luctuosus*	Secure		
Dark Crab Spider	*Xysticus obscurus*	Undetermined		
Triangular Crab Spider	*Xysticus triangulosus*	Secure		
Araneae – Titanoecidae			**Spiders – Titanoecid Spiders**	
Snow Titanoecid Spider	*Titanoeca nivalis*	Undetermined		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT. There is not enough information readily available to determine if the range of many spider species is limited in the NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

6.15 Vascular Plants



Plants give us the first and most lasting impression of a landscape. Being able to identify plants will give any person the feeling of belonging to that landscape: of being home. The traditional use of vascular plants is being recorded in ever-increasing detail to preserve this information for future generations. Fascinating and informative books are now available on the multiple uses of vascular plants in the NWT – see the references Andre and Fehr (2000) and Inuvialuit Elders and Bandringa (2010) at the end of this report.

Plants come in many forms. Vascular plants have a special tube-like system to transport nutrients and water in their stem. Many non-vascular plants, such as mosses and some lichens were ranked for the first time in lists further down in this report.

The general status of all vascular plants found or expected in the NWT was first ranked in 2006. All ranks were reviewed in 2010, new species were added, and some errors were corrected in the following pages.

The taxonomy of vascular plants is still changing since the publication of ranks in 2006. Again, we have tracked these changes in the *NWT Species Monitoring Infobase* at www.nwtspeciesatrisk.ca, to facilitate our upgrade to the new taxonomy. In the list below, we retained the most recent taxonomic names and updated all species names according to the Flora of North America (FNA), available on the Internet at http://hua.huh.harvard.edu/FNA/ and to Kartesz (1999), for groups of plants that had not been treated in the FNA by December 2010.

■ Blue Columbine
Photo Credit: R Kennedy

Many plant experts from the NWT and visiting botanists from outside the NWT have helped review the ranks of our vascular plants. We acknowledge their help at the end of the report.

Starting in 2007, we have been taking photographs and transcribing label information from each original specimen of plant ever collected from the NWT and stored in Canadian museums. This effort is called the *NWT Virtual Herbarium*. Most of the specimens stored at Agriculture and Agri-food Canada in Ottawa, and many of those stored at University of Alberta are now part of this database. It is proving valuable to review the ranks of vascular plants, to map the location of rare plants, to help plan for more surveys, and to determine if plants that may be at risk are in a proposed development area or a proposed protected area.

NWT is home to five species of plants that are extremely rare in the world. All are found in or near areas that remained unglaciated during the last Glacial Age. These areas are called refugia, and are part of the north-western region of North America called Beringia. Two of these plants, the hairy rockcress and the Nahanni aster are found only in the NWT, and nowhere else in the world.

Many alien species in the NWT are plants. So far 116 plant species have been introduced in the NWT that originated either in Eurasia or from elsewhere in North America. New alien (introduced) plants are found every few years.

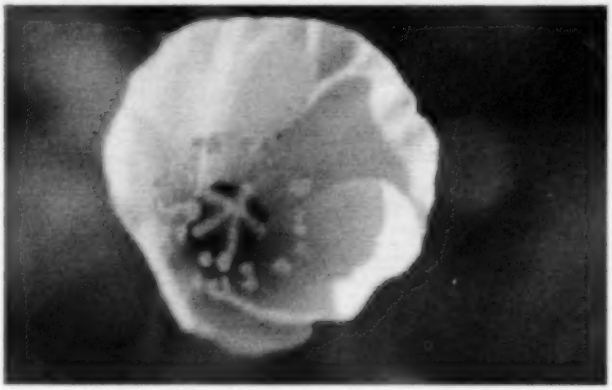
Monitoring plants continues in northern ecosystems. Since 2006, new plant surveys have been performed. These surveys, in addition to information contributed by visiting botanists, users of medicinal plants, and many knowledgeable people, were the source of new information for this ranking of the general status of vascular plants in the NWT.

Get involved: Send questions and photos to NWTSOER@gov.nt.ca. Remember to send all your plant vouchers to a reputed herbarium.

Dr. Suzanne Carrière
Biologist (Biodiversity)
Wildlife Division
Environment and Natural Resources, GNWT

List 15. Vascular Plants

There are 1151 species of vascular plants in the NWT. An additional 27 species of plants are expected to be present. Twenty-nine NWT species are rare in the world and are of global conservation concern. Plants are listed first according to the *Class* they belong to, in phylogenic order. Within *Classes*, plants are listed alphetically by the *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows the Flora of North America (FNA 2001-2010), or Kartesz (1999) for families not covered in FNA as of December 2010. Exceptions are detailed in footnotes. Old names for some families are given in paranthesis.



■ Lapland Poppy Photo Credit: R Decker

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Lycopodiopsida					**Large Clubmosses**
Lycopodiales – Lycopodiaceae					**Large Clubmosses – Clubmosses**
Alpine Clubmoss	*Diphasiastrum alpinum*	Secure			
Trailing Clubmoss	*Diphasiastrum complanatum*	Secure			
Sitka Ground Fir	*Diphasiastrum sitchense*	Presence Expected			
Fir Clubmoss	*Huperzia selago*	Secure			
Bristly Clubmoss	*Lycopodium annotinum*	Secure			
Running Clubmoss	*Lycopodium clavatum*	Undetermined			
Tree Clubmoss	*Lycopodium dendroideum*	Sensitive			
One-cone Clubmoss	*Lycopodium lagopus*	Undetermined			
Isoetopsida					**Quillworts and Spikemosses**
Isoetales – Isoetaceae					**Quillworts – Quillworts**
Spiny-spored Quillwort	*Isoetes echinospora*	Undetermined			
Lake Quillwort	*Isoetes lacustris*	May Be At Risk	L		
Selaginellales – Selaginellaceae					**Spikemosses – Spikemosses**
Northern Spikemoss	*Selaginella selaginoides*	Secure			
Siberian Spikemoss	*Selaginella sibirica*	Undetermined	L		
Equisetopsida					**Horsetails**
Equisetales – Equisetaceae					**Horsetails – Horsetails**
Field Horsetail	*Equisetum arvense*	Secure			
Water Horsetail	*Equisetum fluviatile*	Secure			
Tall Scouring Rush	*Equisetum hyemale*	Secure			
Marsh Horsetail	*Equisetum palustre*	Secure			
Meadow Horsetail	*Equisetum pratense*	Secure			

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Dwarf Scouring Rush	*Equisetum scirpoides*	Secure			
Woodland Horsetail	*Equisetum sylvaticum*	Secure			
Variegated Horsetail	*Equisetum variegatum*	Secure			
Ophioglossopsida					**Fern-allies**
Ophioglossales – Ophioglossaceae					**Moonwort fern-allies – Moonworts**
Triangle Moonwort	*Botrychium lanceolatum*	Presence Expected			
Common Moonwort	*Botrychium lunaria*	Secure			
Mingan's Moonwort	*Botrychium minganense*	May Be At Risk			
Leathery Grape-fern	*Botrychium multifidum*	May Be At Risk	L		
Northwestern Moonwort	*Botrychium pinnatum*	May Be At Risk	L		
Least Moonwort	*Botrychium simplex*	Undetermined	L		
Spatulate Moonwort	*Botrychium spathulatum*	May Be At Risk	L		G3 - 2008
Rattlesnake Fern	*Botrychium virginianum*	Sensitive			
Filicopsida					**True Ferns**
Polypodiales – Aspleniaceae					**Ferns – Spleenworts**
Green Spleenwort	*Asplenium viride*s	May Be At Risk			
Polypodiales – Dryopteridaceae					**Ferns – Wood Ferns**
Spinulose Wood-fern	*Dryopteris carthusiana*	May Be At Risk			
Northern Wood-fern	*Dryopteris expansa*	May Be At Risk	L		
Fragrant Cliff Wood-fern	*Dryopteris fragrans*	Secure			
Northern Holly-fern	*Polystichum lonchitis*	Undetermined	L		
Polypodiales – Onocleaceae					**Ferns – Ostrich Ferns**
Ostrich Fern	*Matteuccia struthiopteris*	Sensitive	L		
Polypodiales – Polypodiaceae					**Ferns – Polypodies**
Sibirian Polypody	*Polypodium sibiricum*	Secure			
Rock Polypody	*Polydodium virginianum*	Undetermined			
Polypodiales – Pteridaceae					**Ferns – Rock-brakes**
American Parsley-fern	*Cryptogramma acrostichoides*	Secure			
Alaska Parsley-fern	*Cryptogramma sitchensis*	May Be At Risk	L		
Slender Rock-brake	*Cryptogramma stelleri*	May Be At Risk			
Smooth Cliff-brake	*Pellaea glabella*	May Be At Risk	L		
Polypodiales – Thelypteridaceae					**Ferns – Beech Ferns**
Northern Beech Fern	*Phegopteris connectilis*	Sensitive			
Polypodiales – Woodsiaceae					**Ferns – Cliff Ferns**
Subarctic Lady-fern	*Athyrium filix-femina*	Sensitive			
Fragile Fern	*Cystopteris fragilis*	Secure			
Mountain Bladder-fern	*Cystopteris montana*	Sensitive			
Common Oak-fern	*Gymnocarpium dryopteris*	Secure			

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Nahanni Oak-fern	*Gymnocarpium jessoense*	Secure			
Alpine Cliff-fern	*Woodsia alpina*	Sensitive			
Smooth Cliff-fern	*Woodsia glabella*	Secure			
Rusty Cliff-fern	*Woodsia ilvensis*	Secure			
Oregon Cliff-fern	*Woodsia oregana*	Presence Expected			
Pinopsida					**Coniferous seed plants**
Pinales – Cupressaceae					**Pine-like shrubs – Junipers**
Common Juniper	*Juniperus communis*	Secure			
Creeping Juniper	*Juniperus horizontalis*	Secure			
Pinales – Pinaceae					**Pine-like trees – Pines and relatives**
Rocky Mountain Subalpine Fir	*Abies bifolia*	Secure			
Tamarack	*Larix laricina*	Secure			
White Spruce	*Picea glauca*	Secure			
Black Spruce	*Picea mariana*	Secure			
Jack Pine	*Pinus banksiana*	Secure			
Lodgepole Pine	*Pinus contorta*	Secure		①	
Monocotyledonae					**Monocot flowering plants**
Alismatales – Alismataceae					**Waterplants – Water Plantains**
Northern Water Plantain	*Alisma triviale*	Sensitive	L		
Northern Arrowhead	*Sagittaria cuneata*	Secure			
Arales – Acoraceae					**Aroids – Sweetflags**
Several Vein Sweetflag (Rat Root)	*Acorus americanus*	May Be At Risk	L		
Arales – Araceae					**Aroids – Callas**
Wild Calla (Water Dragon)	*Calla palustris*	Secure			
Arales – Lemnaceae					**Aroids – Duckweeds**
Star Duckweed	*Lemna trisulca*	Secure			
Turion Duckweed	*Lemna turionifera*	Secure			
Cyperales – Cyperaceae					**Grass-like herbs – Sedges and relatives**
Red Clubrush	*Blysmopsis rufus*	May Be At Risk	L		
Saltmarsh Bulrush	*Bolboschoenus maritimus*	May Be At Risk	L		
Circumpolar Sedge	*Carex adelostoma*	Sensitive			
Lesser Brown Sedge	*Carex adusta* [4]	Undertermined		#	
Black-and-White-Scale Sedge	*Carex albonigra*	Secure			
Water Sedge	*Carex aquatilis*	Secure	L		
Northern Clustered Sedge	*Carex arcta*	Undertermined	L	3	
Wheat Sedge	*Carex atherodes*	Secure			
Slender-beak Sedge	*Carex athrostachya*	Presence Expected			

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Scabrous Black Sedge	*Carex atratiformis*	Secure			
Dark-brown Sedge	*Carex atrofusca*	Secure			
Lesser Black-scaled Sedge	*Carex atrosquama*	Sensitive			
Golden Fruit Sedge	*Carex aurea*	Secure			
Bebb's Sedge	*Carex bebbii*	Sensitive	L		
Two-colour Sedge	*Carex bicolor*	Secure			
Bigelow's Sedge	*Carex bigelowii*	Secure			
Yukon Sedge	*Carex bonanzensis*	Secure			
Brownish Sedge	*Carex brunnescens*	Secure			
Buxbaum's Sedge	*Carex buxbaumii*	Secure			
Silvery Sedge	*Carex canescens*	Secure			
Hairlike Sedge	*Carex capillaris*	Secure			
Capitate Sedge	*Carex capitata*	Secure			
Creeping Sedge	*Carex chordorrhiza*	Secure			
Low Northern Sedge	*Carex concinna*	Secure			
Crawford Sedge	*Carex crawfordii*	Sensitive	L		
Northern Sedge	*Carex deflexa*	Secure			
Dewey's Sedge	*Carex deweyana*	Undetermined	L	3	
Lesser Panicled Sedge	*Carex diandra*	Secure			
Softleaf Sedge	*Carex disperma*	Secure			
Needle-leaved Sedge	*Carex duriuscula*	May Be At Risk	L		
Bristle-leaved Sedge	*Carex eburnea*	Secure			
Goosegrass Sedge	*Carex eleusinoides*	May Be At Risk			
Thread-leaved Sedge	*Carex filifolia*	Sensitive			
Short-leaf Sedge	*Carex fuliginosa*	Secure			
Garber's Elk Sedge	*Carex garberi*	Secure			
Glacier Sedge	*Carex glacialis*	Secure			
Gravel Sedge	*Carex glareosa*	Sensitive	L		
Northern Bog Sedge	*Carex gynocrates*	Secure			
Hudson Bay Sedge	*Carex heleonastes*	Sensitive			
Arctic Marsh Sedge	*Carex holostoma*	Secure			
Hood's Sedge	*Carex hoodii*	May Be At Risk	L		
Inland Sedge	*Carex interior*	Sensitive			
Krause's Sedge	*Carex krausei*	Undetermined			
Arctic Harefoot Sedge	*Carex lachenalii*	Secure			
Smooth-stem Sedge	*Carex laeviculmis*	Presence Expected			
Lapland Sedge	*Carex lapponica*	Secure			
Slender Sedge	*Carex lasiocarpa*	Sensitive			
Weak Sedge	*Carex laxa*	May Be At Risk	L		

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Shore Sedge	*Carex lenticularis*	Secure			
Bristly-stalk Sedge	*Carex leptalea*	Secure			
Mud Sedge	*Carex limosa*	Secure			
Livid Sedge	*Carex livida*	Sensitive			
Rye-grass Sedge	*Carex loliacea*	Sensitive			
Mackenzie Sedge	*Carex mackenziei*	May Be At Risk	L		
Falkland Island Sedge	*Carex macloviana*	Undetermined			
Alaska Long-awn Sedge	*Carex macrochaeta*	Presence Expected			
Boreal Bog Sedge	*Carex magellanica*	Secure			
Sea Sedge	*Carex marina*	Secure			
Seaside Sedge	*Carex maritima*	Secure			
Norvegian Carex	*Carex media*	Secure			
Fragile-Seed Sedge	*Carex membranacea*	Secure			
Alpine Tundra Sedge	*Carex microchaeta*	Secure			
False Unicinia Sedge	*Carex microglochin*	Secure			
Pryenean Sedge	*Carex micropoda*	Sensitive			
Small-Wing Sedge	*Carex microptera*	Undetermined	L		
Nard Sedge	*Carex nardina*	Secure			
Blunt Sedge	*Carex obtusata*	Secure			
Few-seeded Sedge	*Carex oligosperma*	May Be At Risk			
Peck's Sedge	*Carex peckii*	May Be At Risk	L		
Liddon Sedge	*Carex petasata*	May Be At Risk	L		
Rock Dwelling Sedge	*Carex petricosa*	Secure			
Mountain Hare Sedge	*Carex phaeocephala*	Sensitive	L		
Short-Stalk Sedge	*Carex podocarpa*	Secure			
Clustered Field Sedge	*Carex praegracilis*[d]	Undetermined		#[to]	
Prairie Sedge	*Carex prairea*	May Be At Risk	L		
Northern Meadow Sedge	*Carex praticola*[d]	Sensitive	L		
Presl's Sedge	*Carex preslii*	Presence Expected			
Ramenski Sedge	*Carex ramenskii*	Undetermined	L		
Loose-flowered Sedge	*Carex rariflora*	Secure			
Retorse Sedge	*Carex retrorsa*	May Be At Risk	L		
Richardson's Sedge	*Carex richardsonii*	Sensitive	L		
Ross' Sedge	*Carex rossii*	Secure			
Swollen Beaked Sedge	*Carex rostrata*	Undetermined			
Pumpkin-fruited Sedge	*Carex rotundata*	Secure			
Rock Sedge	*Carex rupestris*	Secure			
Sarwell's Sedge	*Carex sartwellii*	Sensitive	L		
Russet Sedge	*Carex saxatilis*	Secure			

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Bulrush Sedge	*Carex scirpoidea*	Secure			
Dry-Spike Sedge	*Carex siccata*	Secure			
Long-style Sedge	*Carex stylosa*	Undetermined	L	3	
Hoppner's Sedge	*Carex subspathacea*	Undetermined			
Weak Arctic Sedge	*Carex supina*	Secure			
Many-headed Sedge	*Carex sychnocephala*	Sensitive	L		
Quill Sedge	*Carex tenera*	Presence Expected			
Sparse-flowered Sedge	*Carex tenuiflora*	Secure			
Shaved Sedge	*Carex tonsa*	Presence Expected			
Three-seed Sedge	*Carex trisperma*	May Be At Risk	L		
Bear Sedge	*Carex ursina*	Secure			
Northwest Territory Sedge	*Carex utriculata*	Secure			
Sheathed Sedge	*Carex vaginata*	Secure			
Little Green Sedge	*Carex viridula*	Secure			
Williams' Sedge	*Carex williamsii*	Secure			
White-scaled Sedge	*Carex xerantica*	Undetermined	L		
Needle Spike Rush	*Eleocharis acicularis*	Secure			
Slender Spike Rush	*Eleocharis elliptica*	May Be At Risk	L		
Bald Spike Rush	*Eleocharis erythropoda*	Undetermined	L		
Soft-stem Spike Rush	*Eleocharis mamillata*	Undetermined		T[c]	
Common Spike Rush	*Eleocharis palustris*	Secure			
Few-flowered Spike Rush	*Eleocharis quinqueflora*	Secure			
One-glume Spike Rush	*Eleocharis uniglumis*	Sensitive			
Narrow-leaved Cotton-grass	*Eriophorum angustifolium*	Secure			
Short-antler Cotton-grass	*Eriophorum brachyantherum*	Secure			
Sheathed Cotton-grass	*Eriophorum callitrix*	Secure			
Slender Cotton-grass	*Eriophorum gracile*	Secure			
Rusty Cotton-grass	*Eriophorum russelolum*	Secure			
Scheuchzeri White Cotton-grass	*Eriophorum scheuchzeri*	Secure			
Tussock Cotton-grass	*Eriophorum vaginatum*	Secure			
Tassel Cotton-grass	*Eriophorum viridicarinatum*	Secure			
Pacific Kobresia	*Kobresia myosuroides*	Secure			
Siberian Kobresia	*Kobresia sibirica*	Secure			
Simple Kobresia	*Kobresia simpliciuscula*	Secure			
White Beakrush	*Rhynchospora alba*	May Be At Risk	L		
Acerbic Bulrush	*Schoenoplectus acutus*	Undetermined			
Three-square Bulrush	*Schoenoplectus pungens*	May Be At Risk	L		
Soft-stem Bulrush	*Schoenoplectus tabernaemontani*	Undetermined			

Common Name	Scientific Species Name	Status Rank	Range Note[3]	Reason for Change[5]	COSEWIC Status/ Global Conservation Concern[6]
Black-girdled Bulrush	*Scirpus atrocinctus*	Presence Expected			
Small-fruit Bulrush	*Scirpus microcarpus*	Secure			
Alpine Bulrush	*Trichophorum alpinum*	Secure			
Tufted Bulrush	*Trichophorum caespitosum*	Secure			
Rolland's Bulrush	*Trichophorum pumilum*	Sensitive		ⓘ	
Cyperales – Poaceae (Gramineae)					**Grass-like herbs – Grasses**
Richardson's Rice Grass	*Achnatherum richardsonii*	Presence Expected			
Crested Wheat Grass	*Agropyron cristatum*	Alien	X		
Siberian Wheat Grass	*Agropyron fragile*	Alien	X		
Spike Bentgrass	*Agrostis exarata*	Sensitive	L		
Black Bentgrass	*Agrostis gigantea*	Alien	X		
Northern Bentgrass	*Agrostis mertensii*	Secure			
Rough Bentgrass	*Agrostis scabra*	Secure			
Spreading Bentgrass	*Agrostis stolonifera*	Alien	X		
Short-Awn Meadow-foxtail	*Alopecurus aequalis*	Secure			
Creeping Meadow-foxtail	*Alopecurus arundinaceus*	Alien	X		
Magellan Alpine Meadow-foxtail	*Alopecurus magellanicus*	Secure			
Field Meadow-foxtail	*Alopecurus pratensis*	Alien	X		
Broad-Leaf Arctic-bent	*Arctagrostis latifolia*	Secure			
Arctic Sweet Grass	*Anthoxanthum arcticum*	Secure			
Vanilla Sweet Grass	*Anthoxanthum hirtum*	Secure			
Alpine Sweet Grass	*Anthoxanthum monticola*	Secure			
Pendant Grass	*Arctophila fulva*	Secure			
Wild Oats	*Avena fatua*	Alien	X		
Cultivated Oats	*Avena sativa*	Alien	X		
Hooker's Alpine Oat Grass	*Avenula hookeri*	May Be At Risk	L		
American Sloughgrass	*Beckmannia syzigachne* [4]	Secure			
Fringed Brome	*Bromus ciliatus*	Secure			
Meadow Brome	*Bromus commutatus*	Alien	X		
Soft Brome	*Bromus hordeaceus*	Alien	X		
Awnless Brome	*Bromus inermis*	Alien	X		
Pumpelly Brome	*Bromus pumpellianus*	Secure			
Corn Brome	*Bromus squarrosus*	Alien	X		
Downy Brome	*Bromus tectorum*	Alien	X		
Blue-jointed Reed Grass	*Calamagrostis canadensis*	Secure			
Circumpolar Reed Grass	*Calamagrostis deschampsioides*	Sensitive	L		
Lapland Reed Grass	*Calamagrostis lapponica*	Secure			
Plains Reed Grass	*Calamagrostis montanensis*	Presence Expected			

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Purple Reed Grass	*Calamagrostis purpurascens*	Secure			
Slim-Stem Reed Grass	*Calamagrostis stricta*	Secure			
Slender Wood Reed Grass	*Cinna latifolia*	Sensitive			
Moss Grass	*Coleanthus subtilius*	May Be At Risk		#	
Poverty Wild Oat Grass	*Danthonia spicata*	Sensitive	L		
Short-Leaf Hair Grass	*Deschampsia brevifolia*	Secure			
Tufted Hair Grass	*Deschampsia cespitosa*	Secure			
Mackenzie Hair Grass	*Deschampsia mackenzieana*	May Be At Risk		T	Special Concern - 2001/ G2 - 2001
Svkatschew's Hair Grass	*Deschampsia svkatchewii*	May Be At Risk	L	T	
Coastal Salt Grass	*Distichlis spicata*	May Be At Risk	L		
Fisher's Tundra Grass	*Dupontia fisheri*	Secure			
Alaska Wild Rye	*Elymus alaskanus*	Secure			
Canada Nodding Wild Rye	*Elymus canadensis*	Sensitive			
Common Western Wild Rye	*Elymus glaucus*	Undetermined		∃	
Streamside Wild Rye	*Elymus lanceolatus*	Undetermined		∃	
Thick-Spike Wild Rye	*Elymus macrourus*	Secure			
Creeping Wild Rye	*Elymus repens*	Alien	X		
Siberian Wild Rye	*Elymus sibiricus*	Alien	X	∃	
Slender Wild Rye	*Elymus trachycaulus*	Secure			
Violet Wild Rye	*Elymus violaceus*	Secure		T	
Rough Fescue	*Festuca altaica*	Secure			
Lobed Fescue	*Festuca auriculata*	May Be At Risk	L	T	
Baffin Fescue	*Festuca baffinensis*	Secure			
Short-Leaved Fescue	*Festuca brachyphylla*	Secure			
Alaska Fescue	*Festuca bevissima*	May Be At Risk	L	T	
Arctic Fescue	*Festuca edlundiae*	Sensitive			
High Arctic Fescue	*Festuca hyperborea*	Secure		T	
Tundra Fescue	*Festuca lenensis*	May Be At Risk	L		
Proliferous Fescue	*Festuca prolifera*	Undetermined	L		
Richardson's Red Fescue	*Festuca rubra*	Secure			
Rocky Mountain Fescue	*Festuca saximontana*	Secure			
Hard Fescue	*Festuca trachyphylla*	Alien	X		
Steppe Fescue	*Festuca valesiaca*	Alien	X		
Viviparous Fescue	*Festuca viviparoidea*	Undetermined		#	
Small Floating Manna Grass	*Glyceria borealis*	Sensitive			
American Manna Grass	*Glyceria grandis*	Secure			
Mackenzie Valley Manna Grass	*Glyceria pulchella*	Secure			
Fowl Manna Grass	*Glyceria striata*	Secure			

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Needle and Thread Grass	*Hesperostipa comata*	Undetermined	L		
Canadian Needle Grass	*Hesperostipa curtiseta*	Sensitive	L		
Fox-tail Barley	*Hordeum jubatum*	Secure			
Barley	*Hordeum vulgare*	Alien	X	E[e]	
Oriental Koeler's Grass	*Koeleria asiatica*	May Be At Risk	L		
Prairie Koeler's Grass	*Koeleria macrantha*	Sensitive	L		
Downy Lyme Grass	*Leymus innovatus*	Secure			
American Lyme Grass	*Leymus mollis*	Secure			
Annual Rye Grass	*Lolium multiflorum*	Alien	X	T[e]	
Perennial Rye Grass	*Lolium perenne*	Alien	X		
Spiked Muhly	*Muhlenbergia glomerata*	Sensitive	L		
Green Muhly	*Muhlenbergia racemosa*	Undetermined		#	
Matted Muhly	*Muhlenbergia richardsonis*	Sensitive			
Green Tussock Grass	*Nassella viridula*	May Be At Risk	L		
White-grained Mountain Rice Grass	*Oryzopsis asperifolia*	Sensitive	L		
Common Panic Grass	*Panicum capillare*	Undetermined	L		
Reed Canary Grass	*Phalaris arundinacea*[f]	Undetermined			
Common Canary Grass	*Phalaris canariensis*	Alien	X		
Ice Grass	*Phippsia algida*	Secure			
Mountain Timothy	*Phleum alpinum*	Sensitive			
Common Timothy	*Phleum pratense*	Alien	X		
Common Reed	*Phragmites australis*[g]	Undetermined	L		
Slender Short-awn Mountain-rice	*Piptatherum pungens*	Secure			
Sabine's False Semaphore Grass	*Pleuropogon sabinei*	Secure			
Northern Bluegrass	*Poa abbreviata*	Secure			
Alpine Bluegrass	*Poa alpina*	Secure			
Sand Bluegrass	*Poa ammophila*	May Be At Risk	L	T[e]	G3G4 - 2000
Annual Bluegrass	*Poa annua*	Alien	X		
Arctic Bluegrass	*Poa arctica*	Secure			
Flat-Stem Bluegrass	*Poa compressa*	Alien	X		
White Bluegrass	*Poa glauca*	Secure	L		
Hartz's Bluegrass	*Poa hartzii*	Secure			G3G4 - 1998
Interior Bluegrass	*Poa interior*	Undetermined		T[e]	
Fowl Bluegrass	*Poa palustris*	Secure			
Few-flowered Bluegrass	*Poa paucispicula*	Secure			
Porsild's Bluegrass	*Poa porsildii*	Sensitive			G3 - 1997
Kentucky Bluegrass	*Poa pratensis*[h]	Secure			

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Polar Bluegrass	*Poa pseudoabbreviata*	May Be At Risk	L		
Curly Bluegrass	*Poa secunda*	Sensitive			
Anderson's Alkali Grass	*Puccinellia andersonii*	Sensitive			
Northern Alkali Grass	*Puccinellia angustata*	Secure			
Arctic Alkali Grass	*Puccinellia arctica*	Secure			
Banks Iland Alkali Grass	*Puccinellia banksiensis*	May Be At Risk		#	
Prince Patrick Alkali Grass	*Puccinellia bruggemannii*	Sensitive	L		
Speading Alkali Grass	*Puccinellia distans*	Alien	X		
Alaska Alkali Grass	*Puccinellia nutkaensis*	Undetermined		T[d]	
Polar Nuttall's Alkali Grass	*Puccinellia nuttalliana* [1]	Sensitive			G3 - 1998
Creeping Alkali Grass	*Puccinellia phyrganodes*	Secure			
Arctic Tussock Alkali Grass	*Puccinellia vaginata*	Sensitive			
Vahl's Alkali Grass	*Puccinellia vahliana*	Secure			
Tall Rye Grass	*Schedonorus arundinaceum*	Alien	X	#	
False Melic Grass	*Schizachne purpurascens*	Secure			
Common River Grass	*Scolochloa festucacea*	Sensitive	L		
Cultivated Rye	*Secale cereale*	Alien	X		
Rough Bristlegrass	*Setaria verticillata*	Alien	X		
Green Bristlegrass	*Setaria viridis*	Alien	X		
Alkali Cordgrass	*Spartina gracilis*	Sensitive			
Freshwater Cordgrass	*Spartina pectinata*	May Be At Risk	L		
Slender Wedgescale Grass	*Sphenopholis intermedia*	Secure			
Intermediate Quackgrass	*Thinopyrum intermedium*	Alien	X	#	
Siberian False Oat	*Trisetum sibiricum*	Presence Expected			
Narrow False Oat	*Trisetum spicatum*	Secure			
Bread Wheat	*Triticum aestivum*	Alien	X		
Arctic Hairgrass	*Vahlodea atropurpurea*	Sensitive			
Brome Six-weeks Grass	*Vulpia bromoides*	Alien	X		
Juncales – Juncaceae					**Rush-like herbs – Rushes**
Northern Green Rush	*Juncus alpinoarticulatus*	Secure			
Arctic Rush	*Juncus arcticus*	Secure			
Two-flowered Rush	*Juncus biglumis*	Secure			
Toad Rush	*Juncus bufonius*	Secure			
Chestnut Rush	*Juncus castaneus*	Secure			
Drummond Rush	*Juncus drummondii*	Secure			
Dudley's Rush	*Juncus dudleyi*	Sensitive	L		
Thread Rush	*Juncus filiformis*	Secure			
Long-styled Rusk	*Juncus longistylis*	Undetermined	L	#	
Merten's Rush	*Juncus mertensianus*	Presence Expected			

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Knotted Rush	*Juncus nodosus*	Secure			
Moor Rush	*Juncus stygius*	Sensitive	L		
Northern White Rush	*Juncus triglumis*	Secure			
Vasey Rush	*Juncus vaseyi*	Undetermined			
Arctic Wood Rush	*Luzula arctica*	Secure			
Curved Wood Rush	*Luzula arcuata*	Secure			
Northern Wood Rush	*Luzula confusa*	Secure			
Greenland Wood Rush	*Luzula groenlandica*	Secure			
Kjellman Wood Rush	*Luzula kjellmaniana*	Undetermined			
Common Wood Rush	*Luzula multiflora*	Secure			
Small-flowered Wood Rush	*Luzula parviflora*	Secure			
Rufous Wood Rush	*Luzula rufescens*	May Be At Risk	L		
Spiked Wood Rush	*Luzula spicata*	Secure			
Wahlenberg's Wood Rush	*Luzula wahlenbergii*	Secure			
Liliales – Iridaceae					**Lily-like plants – Iris**
Strict Blue-eyed Iris	*Sisyrinchium montanum*	Secure			
Pale Blue-eyed Iris	*Sisyrinchium septentrionale*	May Be At Risk		I[e]	
Liliales – Liliaceae					**Lily-like plants – Lilies**
Welsh Onion	*Allium fistulosum*	Alien	X		
Wild Chives	*Allium schoenoprasum*	Secure			
Common Alpine Lily	*Lloydia serotina*	Secure			
Wild Lily-of-the-Valley	*Maianthemum canadense*	Undetermined			
Large False Soloman's Seal	*Maianthemum racemosum*	Undetermined			
Starry False Soloman's Seal	*Maianthemum stellatum*	Secure			
Three-leaf False Soloman's Seal	*Maianthemum trifolium*	Secure			
Clasping Twisted Stalk	*Streptopus amplexifolius*	Sensitive	L		
Northern False Asphodel	*Tofieldia coccinea*	Secure			
Scotch False Asphodel	*Tofieldia pusilla*	Secure			
Sticky False Asphodel	*Triantha glutinosa*	Secure			
American False Hellebore	*Veratrum viride*	Sensitive			
Mountain Death Camas	*Zigadenus elegans*	Secure			
Najadales – Juncaginaceae					**Naiad-like plants – Arrowgrasses**
Seaside Arrowgrass	*Triglochin maritima*	Secure			
Marsh Arrowgrass	*Triglochin palustris*	Secure			
Najadales – Najadaceae					**Naiad-like plants – Naiads**
Slender Naiad	*Najas flexilis*	Sensitive	L		
Najadales – Potamogetonaceae					**Naiad-like plants – Pondweeds**
Alpine Pondweed	*Potamogeton alpinus*	Secure			
Leafy Pondweed	*Potamogeton foliosus*	Sensitive			

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Fries Pondweed	*Potamogeton friesii*	Secure			
Grassy Pondweed	*Potamogeton gramineus*	Secure			
Illinois Pondweed	*Potamogeton illinoensis*	May Be At Risk	L		
Floating Pondweed	*Potamogeton natans*	Sensitive	L		
Blunt-leaf Pondweed	*Potamogeton obtusifolius*	Sensitive	L		
White-stem Pondweed	*Potamogeton praelongus*	Secure			
Slender Pondweed	*Potamogeton pusillus*	Secure			
Richarson's Pondweed	*Potamogeton richardsonii*	Secure			
Flatleaf Pondweed	*Potamogeton robbinsii*	May Be At Risk	L	II	
Straightleaf Pondweed	*Potamogeton strictifolius*	Secure			
Yenisei River Pondweed	*Potamogeton subsibiricus*	Sensitive			
Flatstem Pondweed	*Potamogeton zosteriformis*	Undetermined			
Slender Pondweed	*Stuckenia filiformis*	Secure			
Sago Pondweed	*Stuckenia pectinata*	Sensitive			
Sheathed Pondweed	*Stuckenia vaginata*	Secure			
Najadales – Ruppiaceae					**Naiad-like plants – Wigeon-grasses**
Wigeon-grass	*Ruppia cirrhosa*	Sensitive	L		
Najadales – Scheuchzeriaceae					**Naiad-like plants – Pod Grasses**
Pod Grass	*Scheuchzeria palustris*	Secure			
Najadales – Zannichelliaceae					**Naiad-like plants – Horned Pondweeds**
Horned Pondweed	*Zannichellia palustris*	May Be At Risk	L		
Orchidales – Orchidaceae					**Orchid-like plants – Orchids**
Small Round-leaved Orchis	*Amerorchis rotundifolia*	Secure			
Calypso	*Calypso bulbosa*	Secure			
Long-bract Orchid	*Coeloglossum viride*	Undetermined			
Early Coral Root	*Corallorhiza trifida*	Secure			
Pink Lady's-slipper	*Cypripedium acaule*	Undetermined	L		
Spotted Lady's-slipper	*Cypridedium guttatum*	Secure			
Yellow Lady's-slipper	*Cypridedium parviflorum*	Secure			
Sparrow's-egg Lady's-slipper	*Cypripedium passerinum*	Secure			
Lesser Rattlesnake Plantain	*Goodyera repens*	Secure			
Loesel's Twayblade	*Liparis loeselii*	May Be At Risk	L		
Northern Twayblade	*Listera borealis*	Secure			
Heart-leaved Twayblade	*Listera cordata*	Sensitive	L		
White Adder's-mouth	*Malaxis monophyllos*	May Be At Risk	L		
Bog Adder's-mouth	*Malaxis paludosa*	May Be At Risk	L		
Tall Northern Green Orchid	*Platanthera aquilonis*	Secure			
White Bog Orchid	*Platanthera dilatata*	May Be At Risk	L		
Blunt-leaved Bog Orchid	*Platanthera obtusata*	Secure			

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Small Round-leaved Bog Orchid	*Platanthera orbiculata*	Sensitive	L		
Hooded Ladies'-tresses	*Spiranthes romanzoffiana*	Secure			
Typhales – Sparganiaceae					**Cattail-like plants – Bur-reeds**
Narrow-leaf Bur-reed	*Sparganium angustifolium*	Secure			
Unbranched Bur-reed	*Sparganium emersum*	Secure			
Giant Bur-reed	*Sparganium eurycarpum*	Undetermined			
Northern Bur-reed	*Sparganium hyperboreum*	Secure			
Small Bur-reed	*Sparganium natans*	Secure			
Typhales – Typhaceae					**Cattail-like plants – Cattails**
Broad-leaf Cattail	*Typha latifolia*	Secure			
Dicotylodonea					**Dicot flowering plants**
Apiales – Apiacae					**Carrot-like plants – Parsnips**
Seaside Angelica	*Angelica lucida*	May Be At Risk	L		
American Thoroughwax	*Bupleurum americanum*	Secure			
Bulbous Water-hemlock	*Cicuta bulbifera*	Secure			
Spotted Water-hemlock	*Cicuta maculata*	Secure			
Mackenzie's Water-hemlock	*Cicuta virosa*	Secure			
Jakutsk Snow-parsley	*Cnidium cnidiifolium*	Secure			
Cow Parsnip	*Heracleum maximum*	Secure			
Blunt Fruited Sweet-cicely	*Osmorhiza depauperata*	Undetermined	L	∃	
Wild Parsnip	*Pastinaca sativa*	Alien	X		
Macoun's Podistera	*Podistera macounii*	May Be At Risk	L	∃	
Black Sanicle	*Sanicula marilandica*	Presence Expected			
Water Parsnip	*Sium suave*	Secure			
Apiales – Araliaceae					**Carrot-like plants – Sarsaparilla**
Wild Sarsaparilla	*Aralia nudicaulis*	Secure			
Asterales – Asteraceae (Compositae)					**Daisy-like plants – Asters and relatives**
Siberian Yarrow	*Achillea alpina*	Secure			
Common Yarrow	*Achillea millefolium*[d]	Secure			
Pearl Yarrow	*Achillea ptarmica*	Alien	X		
Orange False Dandelion	*Agoseris aurantiaca*	Undetermined	L	∃	
Pale False Dandelion	*Agoseris glauca*	Sensitive			
Marsh Alkali Aster	*Almutaster pauciflorus*	May Be At Risk	L		
Annual Ragweed	*Ambrosia artemisiifolia*[f]	Alien	X	∃	
Pearly Everlasting	*Anaphalis margaritacea*	May Be At Risk	L		
Alpine Pussytoes	*Antennaria alpina*	Secure			
Dense-leaved Pussytoes	*Antennaria densifolia*	Secure			G3 - 2006

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Fries' Pussytoes	*Antennaria friesiana*	Secure			
Rocky Mountain Pussytoes	*Antennaria media*	Undetermined			
Small-leaf Pussytoes	*Antennaria microphylla*	Secure			
Pygmy Pussytoes	*Antennaria monocephala*	Secure			
Field Pussytoes	*Antennaria neglecta*	Sensitive			
Showy Pussytoes	*Antennaria pulcherrima*	Secure			
Rosy Pussytoes	*Antennaria rosea*	Secure			
Arctic Daisy	*Arctanthemum arcticum*	Sensitive	L		
Narrowleaf Arnica	*Arnica angustifolia*	Secure			
Leafy Arnica	*Arnica chamissonis*	Secure			
Heart-leaved Arnica	*Arnica cordifolia*	Undetermined	L	3	
Snow Arnica	*Arnica griscomii*	Secure			
Lance-leaf Arnica	*Arnica lanceolata*	May Be At Risk	L		
Mountain Arnica	*Arnica latifolia*	Sensitive	L		
Lessing's Arnica	*Arnica lessingii*	Secure			
Long-leaved Arnica	*Arnica lonchophylla*	Secure			
Hairy Arnica	*Arnica mollis*	Undetermined	L	3	
Alaska Sagebrush	*Artemisia alaskana*	May Be At Risk	L		
Arctic Sagebrush	*Artemisia arctica*	Secure			
Biennial Sagebrush	*Artemisia biennis*	Alien	X		
Boreal Sagebrush	*Artemisia borealis*	Secure			
Dragon Sagebrush	*Artemisia dracunculus*	May Be At Risk	L		
Prairie Sagebrush	*Artemisia frigida*	Secure			
Three-fork Sagebrush	*Artemisia furcata*	Sensitive			
Purple Sagebrush	*Artemisia globularia*	Presence Expected			
Pacific Alpine Sagebrush	*Artemisia glomerata*	Presence Expected			
White Sagebrush	*Artemisia ludoviciana*	May Be At Risk	L		
Tilesius Sagebrush	*Artemisia tilesii*	Secure			
Alpin Aster	*Aster alpinus*	Secure			
English Daisy	*Bellis perennis*	Alien	X	#	
Nodding Beggarticks	*Bidens cernua*	Secure			
Great Northern Aster	*Canadanthus modestus*	Presence Expected			
Creeping Canada Thistle	*Cirsium arvense*	Alien	X		
Drummond Thistle	*Cirsium drummondii*	Sensitive			
Leafy Thistle	*Cirsium foliosum*	May Be At Risk	L		
Canada Horseweed	*Conyza canadensis*	Undetermined			
Elegant Hawksbeard	*Crepis elegans*	Undetermined			
Dwarf Alpine Hawksbeard	*Crepis nana*	Secure			
Narrow-leaf Hawksbeard	*Crepis tectorum*	Alien	X		

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Bitter Fleabane	*Erigeron acris*	Secure			
Tufted Fleabane	*Erigeron caespitosus*	Presence Expected			
Dwarf Mountain Fleabane	*Erigeron compositus*	Secure			
Denali Fleabane	*Erigeron denali*	Sensitive	L	T[5]	
Angular Fleabane	*Erigeron elatus*	Secure			
Smooth Fleabane	*Erigeron glabellus*	Secure			
Low Fleabane	*Erigeron humilis*	Secure			
Tundra Fleabane	*Erigeron hyperboreus*	Undetermined			G3G4 - 1994
Hyssop-leaved Fleabane	*Erigeron hyssopifolius*	Secure			
Short-Ray Fleabane	*Erigeron lonchophyllus*	Secure			
Snow Fleabane	*Erigeron nivalis*	May Be At Risk	L	T[5]	
Philadelphia Fleabane	*Erigeron philadelphicus*	Secure			
Porsild's Fleabane	*Erigeron porsildii*	Secure			
One-flower Fleabane	*Erigeron uniflorus*	Secure			
Yukon Fleabane	*Erigeron yukonensis*	May Be At Risk			
Siberian Aster	*Eurybia sibirica*	Secure			
Grass-leaved Goldenrod	*Euthamia graminifolia*	Sensitive			
Great Blanket-flower	*Gaillardia aristata* [4]	Undetermined			
Low Cudweed	*Gnaphalium uliginosum*	Alien	X		
Broadleaf Gumweed	*Grindelia hirsutula*	May Be At Risk	L		
Common Sneezeweed	*Helenium autumnale*	Sensitive	L		
Common Sunflower	*Helianthus annuus*	Alien	X	[illegible]	
White-flowered Hawkweed	*Hieracium albiflorum*	May Be At Risk	L		
Woolly Hawkweed	*Hieracium triste*	Secure	L	T[5]	
Umbellate Hawkweed	*Hieracium umbellatum*	Secure			
Entire-leaf Daisy	*Hutteniella integrifolia*	Secure			
Prickly Lettuce	*Lactuca serriola*	Alien	X	[illegible]	
Ox-eye Daisy	*Leucanthemum vulgare*	Alien	X		
Pineapple Weed	*Matricaria discoidea*	Alien	X		
Tartarian Lettuce	*Mulgedium pulchellum*	Secure			
Dwarf Arctic Groundsel	*Packera cymbalaria*	Secure			
Boreal Groundsel	*Packera hyperborealis*	Secure			
Rayless Mountian Groundsel	*Packera indecora*	Secure			
Ogotoruk Creek Groundsel	*Packera ogotorukensis*	May Be At Risk	L		
Alpine Groundsel	*Packera paucifora*	Sensitive			
Balsam Groundsel	*Packera paupercula*	Secure			
Rocky Mountian Groundsel	*Packera streptanthifolia*	Secure			
Arctic Sweet Coltsfoot	*Petasites frigidus*	Secure			
Goldenweed	*Pyrrocoma uniflora*	May Be At Risk	L		

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Narrow-leaf Saw-wort	*Saussurea angustifolia*	Secure			
Desert Ragwort	*Senecio eremophilus*	Sensitive	L		
Black-tip Ragwort	*Senecio lugens*	Secure			
Mount Sheldon Ragwort	*Senecio sheldonensis*	May Be At Risk	L		G2G3 - 2009
Arrow-leaf Ragwort	*Senecio triangularis*	Secure			
Common Ragwort	*Senecio vulgaris*	Alien	X		
Elegant Goldenrod	*Solidago lepida*	Secure			
Alpine Multiray Goldenrod	*Solidago multiradiata*	Secure			
Sticky Goldenrod	*Solidago simplex*	Secure			
Field Sow Thistle	*Sonchus arvensis*	Alien	X		
Common Sow Thistle	*Sonchus oleraceus* *	Alien	X	3	
Boreal Aster	*Symphyotrichum boreale*	Secure			
Alkali Aster	*Symphyotrichum ciliatum*	Sensitive	L		
Lindley's Aster	*Symphyotrichum ciliolatum*	Secure			
White Heath Aster	*Symphyotrichum ericoides*	Secure			
White Prairie Aster	*Symphyotrichum falcatum*	Secure			
Smooth Blue Aster	*Symphyotrichum laeve*	Presence Expected			
Lance-leaved Aster	*Symphyotrichum lanceolatum*	Undetermined			
Nahanni Aster	*Symphyotrichum nahanniense*	May Be At Risk	L		G1 - 2010
Purple-stemmed Aster	*Symphyotrichum puniceum*	Undetermined		3	
Pygmy Wood Aster	*Symphyotrihum pygmaeum*	May Be At Risk			
Western Mountain Aster	*Symphyotrichum spathulatum*	Sensitive	L		
Yukon Aster	*Symphyotrichum yukonense*	May Be At Risk	L		G3 - 2003
Floccose Tansy	*Tanacetum bipinnatum*	May Be At Risk	L		
Common Tansy	*Tanacetum vulgare*	Alien	X		
North American Dandelion	*Taraxacum ceratophorum*	Secure		1	
Red-seeded Dandelion	*Taraxacum erythrospermum*	Alien	X		
Holman Dandelion	*Taraxacum holmeniarum*	Secure		1	
High Arctic Dandelion	*Taraxacum hyperarcticum*	Secure		1	
Common Dandelion	*Taraxacum officinale*	Alien	X	1	
Northern Dandelion	*Taraxacum phymatocarpum*	Secure			
Rock Dandelion	*Taraxacum scopulorum*	Sensitive			
Arctic Groundsel	*Tephroseris frigida*	Secure			
Kjellman's Groundsel	*Tephroseris kjellmanii*	Sensitive			
Twice-hairy Groundsel	*Tephroseris lindstroemii*	Sensitive	L		
Marsh Groundsel	*Tephroseris palustris*	Secure			
Yukon Groundsel	*Tephroseris yukonensis*	Secure			
Yellow Goatsbeard	*Tragopogon dubius*	Alien	X		
Scentless Chamomile	*Tripleurospermum inodorum*	Alien	X		

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Seashore Chamomile	*Tripleurospermum maritima*	Secure			
Callitrichales – Callitrichaceae			**Waterstarwort-like plants – Waterstarworts**		
Northern Waterstarwort	*Callitriche hermaphroditica*	Secure			
Large Waterstarwort	*Callitriche heterophylla*	Undetermined	L		
March Waterstarwort	*Callitriche palustris*	Secure			
Callitrichales – Hippuridaceae			**Waterstarwort-like plants – Marestails**		
Four-leaved Marestail	*Hippuris tetraphylla*	Sensitive			
Common Marestail	*Hippuris vulgaris*	Secure			
Campanulales – Campanulaceae			**Harebell-like plants – Harebells and Lobelias**		
Yukon Bellflower	*Campanula aurita*	Secure			
Alaska Bellflower	*Campanula lasiocarpa*	Secure			
American Harebell	*Campanula rotundifolia*	Secure			
Arctic Harebell	*Campanula uniflora*	Secure			
Water Lobelia	*Lobelia dortmanna*	May Be At Risk	L		
Kalm's Lobelia	*Lobelia kalmii*	Secure			
Capparales – Brassicaceae (Cruciferae)			**Caper-like plants – Mustards**		
Saltwater Cress	*Arabidopsis salsuginea*	May Be At Risk			
Arctic Rockcress	*Arabis arenicola*	Sensitive	L		
Calder's Rockcress	*Arabis calderi*	May Be At Risk	L		
Limestone Rockcress	*Arabis divaricarpa*	Secure			
Drummond Rockcress	*Arabis drummondii*	Sensitive			
Western Hairy Rockcress	*Arabis hirsuta*	Secure			
Holboell Rockcress	*Arabis holboellii*	Secure			
Lyre-leaf Rockcress	*Arabis lyrata*	Secure			
American Wintercress	*Barbarea orthoceras*	Secure			
Hoary False-alyssum	*Berteroa incana*	Alien	X	#	
Chinese Mustard	*Brassica juncea*	Alien	X		
Turnip	*Brassica napus*	Alien	X		
Bird Rape	*Brassica rapa*	Alien	X		
Smooth Rockcress	*Braya glabella*	Secure			
Alpine Northern Rockcress	*Braya humilis*	Secure			
Hairy Rockcress	*Braya pilosa*	May Be At Risk	L		G1 - 2004
Greenland Rockcress	*Braya thorild-wulffii*	Sensitive			
Large-seeded False Flax	*Camelina sativa*	Alien	X		
Shepherd's Purse	*Capsella bursa-pastoris*	Alien	X		
Alpine Bittercress	*Cardamine bellidifolia*	Secure			
Richardson's Bittercress	*Cardamine digitata*	Secure			
Small-leaved Bittercress	*Cardamine microphylla*	May Be At Risk			
Few-seeded Bittercress	*Cardamine oligosperma*	Sensitive	L		

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Small-flowered Bittercress	*Cardamine parviflora*	May Be At Risk			
Pennsylvania Bittercress	*Cardamine pensylvanica*	Sensitive			
Cuckooflower	*Cardamine pratensis*	Secure			
Purple Bittercress	*Cardamine purpurea*	Presence Expected			
Scurvy Grass	*Cochlearia officinalis*	Secure			
Green Tansy Mustard	*Descurainia incana*	Secure			
Pinate Tansy Mustard	*Descurainia pinnata*	May Be At Risk	L		
Herb Sophia	*Descurainia sophia*	Alien	X		
Northern Tansy Mustard	*Descurainia sophioides*	Secure			
Slender Whitlow-grass	*Draba albertina*	May Be At Risk	L		
Alpine Whitlow-grass	*Draba alpina*	Secure			
Fell-field Whitlow-grass	*Draba arctogena*	May Be At Risk	L		
Golden Draba	*Draba aurea*	Secure			
Boreal Whitlow-grass	*Draba borealis*	Sensitive			
Brewer's Whitlow-grass	*Draba breweri*	Secure			
Gray-leaf Whitlow-grass	*Draba cinerea*	Secure			
Flat-top Whitlow-grass	*Draba corymbosa*	Secure			
Snowbed Whitlow-grass	*Draba crassifolia*	Sensitive			
White Arctic Whitlow-grass	*Draba fladnizensis*	Sensitive			
Rock Whitlow-grass	*Draba glabella*	Secure			
Yellowstone Whitlow-grass	*Draba incerta*	May Be At Risk			
Long-stalk Whitlow-grass	*Draba juvenilis*	Secure			
Milky Whitlow-grass	*Draba lactea*	Secure			
Lance-pod Whitlow-grass	*Draba lonchocarpa*	Sensitive	L		
Macoun's Whitlow-grass	*Draba macounii*	Sensitive			G3G4 - 2006
Wood Whitlow-grass	*Draba nemorosa*	Sensitive			
Yellow Arctic Whitlow-grass	*Draba nivalis*	Secure			
Norwegian Whitlow-grass	*Draba norvegica*	Undetermined	L		
Canadian Arctic Whitlow-grass	*Draba oblongata*	Secure			
Ogilvie Range Whitlow-grass	*Draba ogilviensis*	May Be At Risk	L		G3 - 2006
Few-seeded Whitlow-grass	*Draba oligosperma*	Sensitive			
Palander's Whitlow-grass	*Draba palanderiana*	Sensitive			
Few-flowered Whitlow-grass	*Draba pauciflora*	May Be At Risk	L		
Porsild's Whitlow-grass	*Draba porsildii*	May Be At Risk			G3G4 - 2006
Tall Whitlow-grass	*Draba praealta*	Secure			
Alaska Whitlow-grass	*Draba stenoloba*	Undetermined			
Ellesmere Whitlow-grass	*Draba subcapitata*	Secure			
Common Dog Mustard	*Erucastrum gallicum*	Alien	X		
Worm-seed Wallflower	*Erysimum cheiranthoides*	Secure			

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Shy Wallflower	*Erysimum inconspicuum*	Secure			
Pallas Wallflower	*Erysimum pallasii*	Secure			
Edward Mock Wallflower	*Eutrema edwardsii*	Secure			
Soft Rockcress	*Halimolobos mollis*	Secure			G3? - 2006
Dense-flower Pepperwort	*Lepidium densiflorum*	Alien	X		
Branched Pepperwort	*Lepidium ramosissimumd*	Secure			
Garden Pepperwort	*Lepidium sativum*	Alien	X		
Arctic Bladderpod	*Lesquerella arctica*	Secure			
Calder's Bladderpod	*Lesquerella calderi*	May Be At Risk	L		G3G4 - 2003
Yellow Ball Mustard	*Neslia paniculata*	Alien	X		
Arctic False-wallflower	*Parrya arctica*	Secure			G3? - 1998
Naked Stemmed Wallflower	*Parrya nudicaulis*	Secure			
Hoary Yellowcress	*Rorippa barbareifolia*	May Be At Risk	L		
Persistent-sepal Yellowcress	*Rorippa calycina* [d]	Undetermined	L	∃	G3 - 1997
Mackenzie River Yellowcress	*Rorippa crystallina* [d]	Undetermined	L	∃	
Bog Yellowcress	*Rorippa palustris*	Secure			
Corn Mustard	*Sinapis arvensis*	Alien	X		
Tall Hedge Mustard	*Sisymbrium altissimum*	Alien	X		
False London Rocket	*Sisymbrium loeselii*	Alien	X	#	
Boreal Smelowskia	*Smelowskia borealis*	Sensitive			
Alpine Smelowskia	*Smelowskia calycina*	Sensitive			
Water Awlwort	*Subularia aquatica*	Sensitive			
Arctic Pennycress	*Thlaspi arcticum*	Presence Expected			G3 - 1996
Field Pennycress	*Thlaspi arvense*	Alien	X		
Caryophyllales – Amaranthaceae					**Pink-like plants – Amaranths**
Green Amaranth	*Amaranthus retroflexus*	Alien	X		
Caryophyllales – Caryophyllaceae					**Pink-like plants – Pinks and relatives**
Creeping Sandwort	*Arenaria humifusa*	Secure			
Low-stemmed Sandwort	*Arenaria longipedunculata*	Sensitive	L		
Alpine Chickweed	*Cerastium alpinum*	Undetermined	L		
Arctic Chickweed	*Cerastium arcticum*	Undetermined		ⓘ	
Field Mouse-ear Chickweed	*Cerastium arvense* [d]	Secure			
Bering Sea Chickweed	*Cerastium beeringianum*	Secure			
Bialynick's Chickweed	*Cerastium bialynickii*	Undetermined		ⓘ	
Common Chickweed	*Cerastium fontanum*	Alien	X		
Great Chickweed	*Cerastium maximum*	May Be At Risk	L		
Nodding Chickweed	*Cerastium nutans*	Alien	X		
Regel's Chickweed	*Cerastium regelii*	Secure			

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Northern Pink	*Dianthus repens*	Presence Expected			
Slender Mountain Sandwort	*Eremogone capillaris*	Secure			
Showy Baby's-breath	*Gypsophila elegans*	Alien	X		
Tall Baby's-breath	*Gypsophila paniculata*	Alien	X		
Seabeach Sandwort	*Honckenya peploides*	Secure			
Arctic Stitchwort	*Minuartia arctica*	Secure			
Moutain Stitchwort	*Minuartia biflora*	Secure			
Rock Stitchwort	*Minuartia dawsonensis*	Secure			
Elegant Stitchwort	*Minuartia elegans*	Secure			
Long-pod Stitchwort	*Minuartia macrocarpa*	May Be At Risk	L		
Alpine Stitchwort	*Minuartia obtusiloba*	Sensitive	L		
Ross' Stitchwort	*Minuartia rossii*	Secure			
Boreal Stitchwort	*Minuartia rubella*	Secure			
Bog Stitchwort	*Minuartia stricta*	Sensitive			
Yukon Stitchwort	*Minuartia yukonensis*	Sensitive	L		G3 - 2009
Blunt-leaved Sandwort	*Moehringia lateriflora*	Secure			
Large-leaved Sandwort	*Moehringia macrophylla*	Sensitive	L		
Snow Pearlwort	*Sagina nivalis*	Secure			
Knotted Pearlwort	*Sagina nodosa*	Sensitive			
Procumbent Pearlwort	*Sagina procumbens*	Alien	X		
Alpine Pearlwort	*Sagina saginoides*	Sensitive			
Moss Campion	*Silene acaulis*	Secure			
Balkan Catchfly	*Silene csereii*	Alien	X		
Drummond's Campion	*Silene drummondii*	Undetermined	L		
Arctic Campion	*Silene involucrata*	Secure			
Menzies Pink Campion	*Silene menziesii*	Sensitive			
Ostenfeld's Campion	*Silene ostenfeldii*	Secure			
Creeping Campion	*Silene repens*	Sensitive			
Sorensen's Campion	*Silene sorensenis*	Sensitive			
Apetalous Campion	*Silene uralensis*	Secure			
Corn Spurrey	*Spergula arvensis*	Alien	X		
Saltmarsh Sandspurry	*Spergularia salina*	May Be At Risk	L		
Boreal Stitchwort	*Stellaria borealis*	Secure			
Northern Bog Startwort	*Stellaria calycantha*	Undetermined			
Fleshy Stitchwort	*Stellaria crassifolia*	Secure			
Saltmarch Starwort	*Stellaria humifusa*	Secure			
Longleaf Stitchwort	*Stellaria longifolia*	Secure			
Long-stalked Stitchwort	*Stellaria longipes*	Secure			
Common Starwort	*Stellaria media*	Alien	X		

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Umbellate Stitchwort	*Stellaria umbellata*	May Be At Risk	L		
Arctic-Flower (Merkia)	*Wilhelmsia physodes*	Secure			
Caryophyllales – Chenopodiaceae					**Pink-like plants – Goosefoot and relatives**
Thick-leaved Orache	*Atriplex dioica*	May Be At Risk	L		
Gmelin's Orache	*Atriplex gmelinii*	May Be At Risk	L		
Garden Orache	*Atriplex hortensis*	Alien	X		
Spreading Orache	*Atriplex patula*	Alien	X		
Russian Pigweed	*Axyris amaranthoides*	Alien	X		
Lamb's Quarters	*Chenopodium album*	Alien	X		
Berlandier's Goosefoot	*Chenopodium berlandieri*	Secure			
Strawberry-blite	*Chenopodium capitatum*	Secure			
Narrowleaf Goosefoot	*Chenopodium leptophyllum*	Undetermined	L		
Red Pigweed	*Chenopodium rubrum*	May Be At Risk			
Rocky Mountain Goosefoot	*Chenopodium salinum!*	Sensitive	L		
Maple-leaved Goosefoot	*Chenopodium simplex*	Alien	X		
Hooker's Bugseed	*Corispermum hookeri*	Sensitive			
Alaskan Bugseed	*Corispermum ochotense*	Undetermined			G3G4 - 2000
Hairy Bugseed	*Corispermum villosum*	Alien	X		
Mexican Summer Cypress	*Kochia scoparia*	Alien	X	#	
Nuttall's Povertyweed	*Monolepis nuttalliana*	Sensitive	L		
Red Glasswort	*Salicornia rubra*	May Be At Risk	L		
Garden Spinach	*Spinacia oleracea*	Alien	X		
Horned Sea-blite	*Suaeda calceoliformis*	Sensitive			
White Sea-blite	*Suaeda maritima*	Sensitive	L		
Caryophyllales – Portulacaceae					**Pink-like plants – Spring beauties**
Alpine Spring Beauty	*Claytonia megarhiza*	May Be At Risk	L		
Alaska Spring Beauty	*Claytonia sarmentosa*	Undetermined	L		
Tuberous Spring Beauty	*Claytonia tuberosa*	Sensitive	L		
Water Blinks	*Montia fontana*	Sensitive			
Cornales – Cornaceae					**Dogwood-like plants – Dogwoods**
Dwarf Dogwood (Bunchberry)	*Cornus canadensis*	Secure			
Red Osier Dogwood	*Cornus sericea*	Secure			
Swedish Dogwood	*Cornus suecica*	May Be At Risk	L		
Diapensiales – Diapensiaceae					**Diapensias – Diapensias**
Lapland Diapensia	*Diapensia lapponica*	Secure	L		
Dipsacales – Adoxaceae					**Teasel-like plants – Musk-roots**
Musk-root	*Adoxa moschatellina*	Undetermined	L	3	

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Dipsacales – Caprifoliaceae				**Teasel-like plants – Honeysuckles and relatives**	
Twinflower	*Linnaea borealis*	Secure			
Mountain Honeysuckle	*Lonicera dioica*	Secure			
White Snowberry	*Symphoricarpos albus*	Undetermined	L	3	
Northern Snowberry	*Symphoricarpos occidentalis*	Secure			
Mountain Snowberry	*Symphoricarpos oreophilus*	Undetermined	L		
Squashberry (High-bush cranberry)	*Viburnum edule*	Secure			
Dipsacales – Valerianaceae				**Teasel-like plants – Valerians**	
Clustered Valerian	*Valeriana capitata*	Secure			
Wood Valerian	*Valeriana dioica*	Sensitive			
Sitka Valerian	*Valeriana sitchensis*	Sensitive			
Ericales – Empetraceae				**Blueberry-like plants – Crowberries**	
Black Crowberry	*Empetrum nigrum*	Secure			
Ericales – Ericaceae				**Blueberry-like plants – Blueberries and relatives**	
Bog Rosemary	*Andromeda polifolia*	Secure			
Alpine Bearberry	*Arctostaphylos alpina*	Secure			
Red Bearberry	*Arctostaphylos rubra*	Secure			
Common Bearberry (Kinnikinnick)	*Arctostaphylos uva-ursi*	Secure			
Arctic White Heather	*Cassiope tetragona*	Secure			
Leatherleaf	*Chamaedaphne calyculata*	Secure			
Moss Heather	*Harrimanella hypnoides*	May Be At Risk	L		
Alpine Laurel	*Kalmia microphylla*	Undetermined			
Bog Laurel	*Kalmia polifolia*	Secure			
Common Labrador Tea	*Ledum groenlandicum*	Secure			
Narrow-leaved Labrador Tea	*Ledum palustre*	Secure			
Alpine Azalea	*Loiseleuria procumbens*	Secure			
Purple Mountain Heather	*Phyllodoce caerulea*	Sensitive	L		
Pink Mountain Heather	*Phyllodoce empetriformis*	Sensitive			
Yellow Mountain Heather	*Phyllodoce glanduliflora*	Sensitive			
Lapland Rosebay	*Rhododendron lapponicum*	Secure			
Dwarf Bilberry	*Vaccinium caespitosum*	Undetermined	L	3	
Mountian Huckleberry	*Vaccinium membranaceum*	May Be At Risk	L		
Velvetleaf Blueberry	*Vaccinium myrtilloides*	Sensitive	L	1	
Oval-leaved Blueberry	*Vaccinium ovalifolium*	Undetermined	L	3	
Small Cranberry	*Vaccinium oxycoccos*	Secure			
Alpine Bilberry	*Vaccinium uliginosum*	Secure			
Rock Cranberry (Lingonberry)	*Vaccinium vitis-idaea*	Secure			

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Ericales – Monotropaceae					**Blueberry-like plants – Indian pipes**
Indian Pipe	*Monotropa uniflora*	Undetermined	L		
Ericales – Pyrolaceae					**Blueberry-like plants – Wintergreens**
Pipsissewa	*Chimaphila umbellata*	May Be At Risk	L		
One-flowered Wintergreen	*Moneses uniflora*	Secure			
One-sided Wintergreen	*Orthilia secunda*	Secure			
Pink Pyrola	*Pyrola asarifolia*	Secure			
Greenish-flowered Pyrola	*Pyrola chlorantha*	Secure			
Arctic Pyrola	*Pyrola grandiflora*	Secure			
Lesser Pyrola	*Pyrola minor*	Secure			
Fabales – Fabaceae (Leguminosae)					**Pea-like plants – Peas**
Meadow Milk-vetch	*Astragalus agrestis*	Sensitive			
Alpine Milk-vetch	*Astragalus alpinus*	Secure			
American Milk-vetch	*Astragalus americanus*	Secure			
Indian Milk-vetch	*Astragalus australis*	Secure			
Bodin's Milk-vetch	*Astragalus bodinii*	Secure			
Canadian Milk-vetch	*Astragalus canadensis*	Sensitive	L	ⓘ	
Elegant Milk-vetch	*Astragalus eucosmus*	Secure			
Rattle Milk-vetch	*Astragalus laxmannii*	Sensitive			
Loose-flowered Milk-vetch	*Astragalus tenellus*	Secure			
Tundra Milk-vetch	*Astragalus umbellatus*	Secure			
Siberian Pea-tree	*Caragana arborescens*	Alien	X	∃	
Alpine Sweet-vetch	*Hedysarum alpinum*	Secure			
Boreal Sweet-vetch	*Hedysarum boreale*	Secure			
Beach Pea	*Lathyrus japonicus*	May Be At Risk	L		
Cream Vetchling	*Lathyrus ochroleucus*	Secure			
Bird'sfoot Trefoil	*Lotus corniculatus*	Alien	X	#	
Arctic Lupine	*Lupinus arcticus*	Secure			
Black Medick	*Medicago lupulina*	Alien	X		
Alfalfa	*Medicago sativa*	Alien	X		
White Sweet-clover	*Melilotus albus*	Alien	X		
Yellow Sweet-clover	*Melilotus officinalis*	Alien	X		
Sainfoin	*Onobrychis viciifolia*	Alien	X	#	
Arctic Locoweed	*Oxytropis arctica*	Secure			
Boreal Locoweed	*Oxytropis borealis*	Secure			
Field Locoweed	*Oxytropis campestris*	Secure			
Pendent-pod Locoweed	*Oxytropis deflexa*	Secure			
Maydell Locoweed	*Oxytropis maydelliana*	Secure			
Blackish Locoweed	*Oxytropis nigrescens*	Secure			

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Scamman's Locoweed	*Oxytropis scammaniana*	May Be At Risk	L		G3G4 - 1994
Showy Locoweed	*Oxytropis splendens*	Secure			
Alsike Clover	*Trifolium hybridum*	Alien	X		
Red Clover	*Trifolium pratense*	Alien	X		
White Clover	*Trifolium repens*	Alien	X		
American Purple Vetch	*Vicia americana*	Secure			
Tufted Vetch	*Vicia cracca*	Alien	X	3	
Fagales – Betulaceae					**Beech-like plants – Birches and Alders**
Speckled Alder	*Alnus incana*	Secure			
Green Alder	*Alnus viridis*	Secure			
Dwarf Birch	*Betula glandulosa m*	Secure			
Arctic Dwarf Birch	*Betula nana m*	Secure			
Alaska Paper Birch	*Betula neoalaskana*	Secure			
Water Birch	*Betula occidentalis*	Secure			
Paper Birch	*Betula papyrifera*	Secure			
Bog Birch	*Betula pumila*	Sensitive	L		
Gentianales – Apocynaceae					**Gentian-like plants – Hemps and relatives**
Spreading Dogbane	*Apocynum androsaemifolium*	Secure			
Indian Hemp	*Apocynum cannabinum*	May Be At Risk	L		
Gentianales – Gentianaceae					**Gentian-like plants – Gentians**
Prairie Gentian	*Gentiana affinis*	Sensitive			
Pale Gentian	*Gentiana glauca*	Secure			
Pygmy Gentian	*Gentiana prostrata*	Sensitive			
Northern Gentian	*Gentianella amarella*	Secure			
Four-parted Gentian	*Gentianella propinqua*	Secure			
Dane's Gentian	*Gentianella tenella*	May Be At Risk	L		
Sheared Gentian	*Gentianopsis detonsa*	Secure	L		
Macoun's Gentian	*Gentianopsis macounii*	May Be At Risk	L		
Spurred Gentian	*Halenia deflexa*	Undetermined	L		
Marsh Felwort	*Lomatogonium rotatum*	Secure			
Geraniales – Balsaminaceae					**Geranium-like plants – Impatiens**
Spotted Jewel-weed	*Impatiens capensis*	Undetermined	L		
Western Touch-me-not	*Impatiens noli-tangere*	Undetermined		3	
Geraniales – Geraniaceae					**Geranium-like plants – Geraniums**
Bicknell's Geranium	*Geranium bicknellii*	Secure			
Richardson Geranium	*Geranium richardsonii*	Sensitive	L		
Haloragales – Haloragaceae					**Milfoil-like plants – Milfoils**
Alternate-flower Water Milfoil	*Myriophyllum alterniflorum*	May Be At Risk			

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Spilked Water Milfoil	*Myriophyllum sibiricum*	Secure			
Whorled Water Milfoil	*Myriophyllum verticillatum*	Secure			
Lamiales – Boraginaceae					**Mint-like plants – Borages and relatives**
Arctic Forget-me-not	*Eritrichium nanum*	Undetermined	L		
Showy Forget-me-not	*Eritrichium splendens*	May Be At Risk	L		G3G4 - 2006
Northern Stickseed	*Hackelia deflexa*	Undetermined	L	3	
Western Stickseed	*Lappula occidentalis*	Sensitive			
European Stickseed	*Lappula squarrosa*	Alien	X		
Drummond Bluebell	*Mertensia drummondii*	May Be At Risk			G2 - 2007
Sea Bluebell	*Mertensia maritima*	Sensitive			
Northern Bluebell	*Mertensia paniculata*	Secure			
Alpine Forget-me-not	*Myosotis asiatica*	Secure			
Lamiales – Lamiaceae (Labiatae)					**Mint-like plants – Mints and relatives**
Blue Giant Hyssop	*Agastache foeniculum*	May Be At Risk	L		
American Dragonhead	*Dracocephalum parviflorum*	Secure			
Thyme-leaf Dragonhead	*Dracocephalum thymiflorum*	Alien	X	#	
Brittle- Stem Hemp Nettle	*Galeopsis tetrahit*	Alien	X		
Common Dead Nettle	*Lamium amplexicaule*	Alien	X		
Northern Bugleweed	*Lycopus uniflorus*	Undetermined	L		
Corn Mint	*Mentha arvensis*	Secure			
Wild Bergamot Bee-balm	*Monarda fistulosa*	May Be At Risk	L		
Ledingham's False Dragonhead	*Physostegia ledinghamii*	May Be At Risk	L		G3G4 - 2008
Hooded Skullcap	*Scutellaria galericulata*	Secure			
Hairy Hedge Nettle	*Stachys pilosa*	Secure			
Linales – Linaceae					**Flax-like plants – Flaxes**
Lewis Blue Flax	*Linum lewisii*	Secure			
Common Yellow Flax	*Linum usitatissimum*	Alien	X		
Malvales – Malvaceae					**Mallow-like plants – Mallows**
Dwarf Mallow	*Malva neglecta*	Alien	X		
Myricales – Myricaceae					**Bayberry-like plants – Gales**
Sweet Gale	*Myrica gale*	Secure			
Myrtales – Onagraceae					**Myrtle-like plants – Fireweeds**
Fireweed	*Chamerion angustifolium*	Secure			
River Beauty	*Chamerion latifolium*	Secure			
Small Enchanter's Nightshade	*Circaea alpina*	Sensitive	L		
Alpine Willowherb	*Epilobium anagallidifolium*	Sensitive			
Arctic Willowherb	*Epilobium arcticum*	Sensitive			
Hairy Willowherb	*Epilobium ciliatum*	Secure	L		

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Dauria Willowherb	*Epilobium davuricum*	Sensitive			
Horenmann Willowherb	*Epilobium hornemannii*	Undetermined	L	E	
White-flowered Willowherb	*Epilobium lactiflorum*	Sensitive		I	
Linear-leaved Willowherb	*Epilobium leptophyllum*	Sensitive	L	I	
Marsh Willowherb	*Epilobium palustre*	Secure			
Nepenthales – Droseraceae					**Carnivorous plants – Sundews**
English Sundew	*Drosera anglica*	Secure			
Slenderleaf Sundew	*Drosera linearis*	Sensitive	L	I	
Round-leaved Sundew	*Drosera rotundifolia*	Secure			
Nepenthales – Sarraceniaceae					**Carnivorous plants – Pitcher plants**
Northern Pitcher Plant	*Sarracenia purpurea*	Secure	L	I	
Nymphaeales – Ceratophyllaceae					**Waterlily-like plants – Hornworts**
Common Hornwort	*Ceratophyllum demersum*	Sensitive			
Nymphaeales – Nymphaeaceae					**Waterlily-like plants – Waterlilies and relatives**
Rocky Mountain Pond Lily	*Nuphar polysepala*	May Be At Risk	L		
Variegated Pond Lily	*Nuphar variegata*	Secure			
Dwarf White Waterlily	*Nymphaea leibergii*	May Be At Risk	L		
Pygmy White Waterlily	*Nymphaea tetragona*	Sensitive			
Papaverales – Fumariaceae					**Poppy-like plants – Corydalis**
Golden Corydalis	*Corydalis aurea*	Secure			
Few-flowered Corydalis	*Corydalis pauciflora*	Sensitive			
Pale Corydalis	*Corydalis sempervirens*	Secure			
Papaverales – Papaveraceae					**Poppy-like plants – Poppies**
Lapland Poppy	*Papaver lapponicum*	Secure			
Macoun's Poppy	*Papaver macounii*	Secure			
McConnell's Poppy	*Papaver mcconnellii*	May Be At Risk	L		
Arctic Poppy	*Papaver radicatum*	Secure			
Walpole Poppy	*Papaver walpolei*	Presence Expected			
Plantaginales – Plantaginaceae					**Plantain-like plants – Plantains**
Hairy Plantain	*Plantago canescens*	Secure			
Saline Plantain	*Plantago eriopoda*	Secure			
Nipple-seed Plantain	*Plantago major n*	Alien	X		
Seaside Plantain	*Plantago maritima*	May Be At Risk			
Plumbaginales – Plumbaginaceae					**Leadwort-like plants – Thrifts**
Western Thrift	*Armeria maritima*	Secure			
Polygonales – Polygonaceae					**Rhubarb-like plants – Buckwheats**
Alaska Wild-rhubarb	*Aconogonum alaskanum*	Sensitive			
Meadow Bistort	*Bistorta plumosa*	Secure			

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Alpine Bistort	*Bistorta vivipara*	Secure			
Black Bindweed	*Fallopia convolvulus*	Alien	X		
Iceland Purslane	*Koenigia islandica*	Sensitive			
Mountain Sorrel	*Oxyria digyna*	Secure			
Water Smartweed	*Persicaria amphibia*	Secure			
Pale Smartweed	*Persicaria lapathifolia* [d]	Secure			
Striate Knotweed	*Polygonum achoreum*	Alien	X		
Prostrate Knotweed	*Polygonum aviculare*	Alien	X		
Fowler Knotweed	*Polygonum fowleri*	May Be At Risk	L		
Alaska Knotweed	*Polygonum humifusum*	Sensitive			
Bushy Knotweed	*Polygonum ramosissimum*	Undetermined	L		
Arctic Dock	*Rumex arcticus*	Secure			
Great Water Dock	*Rumex brittanica*	Undetermined	L		
Curly Dock	*Rumex crispus*	Alien	X		
Tierra del Fuego Dock	*Rumex fueginus*	Sensitive			
Lapland Sorrel	*Rumex lapponicus*	May Be At Risk	L		
Western Dock	*Rumex occidentalis*	Secure			
Siberian Willow Dock	*Rumex sibiricus*	Undetermined			
Triangular-valved Dock	*Rumex triangulivalvis*	Secure			
Primulales – Primulaceae				**Primrose-like plants – Primroses**	
Sweet-flower Rock-jasmine	*Androsace chamaejasme*	Secure			
Pygmy-flower Rock-jasmine	*Androsace septentrionalis*	Secure			
Northern Shooting-star	*Dodecatheon frigidum*	Secure			
Few-Flower Shooting-star	*Dodecatheon pulchellum*	Sensitive	L		
Mackenzie River Dwarf Primrose	*Douglasia arctica*	Sensitive	L		G3 - 1998
Arctic Montane Dwarf Primrose	*Douglasia ochotensis*	Undetermined	L		
Sea Milkwort	*Glaux maritima*	May Be At Risk			
Tufted Yellow Loosestrife	*Lysimachia thyrsiflora*	Secure			
Slender Primrose	*Primula borealis*	Sensitive	L		
Greenland Primrose	*Primula egaliksensis*	Secure			
Arctic Primrose	*Primula eximia*	May Be At Risk	L		
Mealy Primrose	*Primula incana*	Secure			
Lake Mistannini Primrose	*Primula mistassinica*	Secure			
Stiff Primrose	*Primula stricta*	Secure			
Northern Starflower	*Trientalis borealis*	Undetermined	L		
Arctic Starflower	*Trientalis europaea*	Sensitive			

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Ranunculales – Ranunculaceae		**Buttercup-like plants – Buttercups and relatives**			
Mountain Monkshood	*Aconitum delphiniifolium*	Secure			
Red Baneberry	*Actaea rubra*	Secure			
Canada Anemone	*Anemone canadensis*	Secure			
Alpine Anemone	*Anemone drummondii*	Sensitive			
Purple Anemone	*Anemone multiceps*	Presence Expected			
Cut-leaved Anemone	*Anemone multifida*	Secure			
Narcissus-flowered Anemone	*Anemone narcissiflora*	Secure			
Small-flowered Anemone	*Anemone parviflora*	Secure			
Prairie Crocus	*Anemone patens*	Secure			
Yellow Anemone	*Anemone richardsonii*	Secure			
Blue Columbine	*Aquilegia brevistyla*	Secure			
Floating Marsh Marigold	*Caltha natans*	Sensitive			
Marsh Marigold	*Caltha palustris*	Secure			
Northern Larkspur	*Delphinium brachycentrum*	Undetermined	L	3	
Pale Larkspur	*Delphinium glaucum*	Secure			
Kidney-leaved Buttercup	*Ranunculus abortivus*	Sensitive			
Common Buttercup	*Ranunculus acris*	Alien	X		
White Water Buttercup	*Ranunculus aquatilis*	Secure			
Seaside Buttercup	*Ranunculus cymbalaria*	Secure			
Subalpine Buttercup	*Ranunculus eschscholtzii*	Secure			
Lesser Spearwort	*Ranunculus flammula*	Secure			
Arctic Buttercup	*Ranunculus gelidus*	Sensitive			
Small Yellow Water-Buttercup	*Ranunculus gmelinii*	Secure			
Arctic Buttercup	*Ranunculus hyperboreus*	Secure			
Lapland Buttercup	*Ranunculus lapponicus*	Secure			
Macoun Buttercup	*Ranunculus macounii*	Secure			
Snowy Buttercup	*Ranunculus nivalis*	Secure			
Pallas' Buttercup	*Ranunculus pallasii*	Sensitive			
Northern Buttercup	*Ranunculus pedatifidus*	Secure			
Bristly Crowfoot	*Ranunculus pensylvanicus* [4]	Undetermined	L	3	
Dwarf Buttercup	*Ranunculus pygmaeus*	Secure			
Prairie Buttercup	*Ranunculus rhomboideus*	May Be At Risk	L		
Sardinain Buttercup	*Ranunculus sabinei*	Sensitive			
Cursed Crowfoot	*Ranunculus sceleratus*	Secure			
Sulphur Buttercup	*Ranunculus sulphureus*	Secure			
Turner's Buttercup	*Ranunculus turneri*	May Be At Risk	L		G3 - 2007
Alpine Meadow Rue	*Thalictrum alpinum*	Secure			
Few Flower Meadow Rue	*Thalictrum sparsiflorum*	May Be At Risk			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Veined Meadow Rue	*Thalictrum venulosum*	Secure			
Rhamnales – Elaeagnaceae		**Buckthorn-like shrubs – Silverberries and relatives**			
American Silverberry	*Elaeagnus commutata*	Secure			
Buffaloberry	*Shepherdia canadensis*	Secure			
Rosales – Crassulaceae		**Rose-like plants – Stonecrops and relatives**			
Water Pigmy-weed	*Crassula aquatica*	May Be At Risk	L		
Entire-leaved Stonecrop	*Rhodiola integrifolium*	Sensitive			
Two-row Stonecrop	*Sedum spurium*	Alien	X	3	
Rosales – Grossulariaceae		**Rose-like plants – Currants**			
Skunk Currant	*Ribes glandulosum*	Secure			
Northern Black Currant	*Ribes hudsonianum*	Secure			
Bristly Black Currant	*Ribes lacustre*	Secure			
Canada Gooseberry	*Ribes oxyacanthoides*	Secure			
Swamp Red Currant	*Ribes triste*	Secure			
Rosales – Rosaceae		**Rose-like plants – Roses and relatives**			
Saskatoon Berry	*Amelanchier alnifolia*	Secure			
Silverweed	*Argentina anserina*	Secure			
Egede Cinquefoil	*Argentina egedii*	Sensitive	L		
Rose Chamaerhodos	*Chamaerhodos erecta*	May Be At Risk			
Marsh Cinquefoil	*Comarum palustre*	Secure			
Shrubby Cinquefoil	*Dasiphora fruticosa*	Secure			
Yellow Mountain Avens	*Dryas drummondii*	Secure			
Entire-leaved Mountain Avens	*Dryas integrifolia*	Secure			
Eight-petal Mountain Avens	*Dryas octopetala*	Secure			
Woodland Strawberry	*Fragaria vesca*	Undetermined	L		
Virginia Strawberry	*Fragaria virginiana*	Secure			
Yellow Avens	*Geum aleppicum*	Secure			
Glacier Avens	*Geum glaciale*	Sensitive	L		
Large-leaved Avens	*Geum macrophyllum*	Secure			
Ross Avens	*Geum rossii*	Secure			
Prairie-smoke	*Geum triflorum*	May Be At Risk	L		
Segmented Luetkea	*Luetkea pectinata*	May Be At Risk	L		
Tall Cinquefoil	*Potentilla arguta*	Sensitive	L		
Two-flowered Cinquefoil	*Potentilla biflora*	Secure			
Staghorn Cinqefoil	*Potentilla bimundorum*	Secure			
Mountain Meadow Cinquefoil	*Potentilla diversifolia*	Sensitive			
Elegant Cinquefoil	*Potentilla elegans*	Secure			
Arctic Cinquefoil	*Potentilla nana*	Secure			
Snow Cinquefoil	*Potentilla nivea*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Norwegian Cinquefoil	*Potentilla norvegica*	Secure			
Pennsylvania Cinquefoil	*Potentilla pensylvanica*	Secure			
Pretty Cinquefoil	*Potentilla pulchella*	Secure			
Rocky Mountain Cinquefoil	*Potentilla rubricaulis*	Secure			
North American Gorodkov's Cinquefoil	*Potentilla subgorodkovii* [e]	Secure		T[e]	
North American Vahl's Cinquefoil	*Potentilla subvahliana* [e]	Undetermined		T[e]	
Vahl's Cinquefoil	*Potentilla vahliana* [e]	Undetermined		T[e]	
Beringian Hairy Potentilla	*Potentilla villosula* [e]	May Be At Risk	L	T[e]	
One-flowered Cinquefoil	*Potentilla vulcanicola* [e]	Undetermined		T[e]	
Pin Cherry	*Prunus pensylvanica*	Secure	L		
Choke Cherry	*Prunus virginiana*	May Be At Risk			
Prickly Rose	*Rosa acicularis*	Secure			
Smooth Rose	*Rosa blanda*	Undetermined	L		
Woods Rose	*Rosa woodsii*	Secure			
Arctic Rasberry	*Rubus arcticus*	Secure			
Cloudberry	*Rubus chamaemorus*	Secure			
Red Raspberry	*Rubus idaeus*	Secure			
Dwarf Red Raspberry	*Rubus pubescens*	Secure			
Canada Burnet	*Sanguisorba canadensis*	Presence Expected			
Great Burnet	*Sanguisorba officinalis* [f]	Undetermined	L		
Sibbaldia	*Sibbaldia procumbens*	Sensitive			
Three-toothed Cinquefoil	*Sibbaldiopsis tridentata*	Sensitive			
False Spiraea	*Sorbaria sorbifolia*	Alien	X		
Greene Mountain Ash	*Sorbus scopulina*	Sensitive	L		
Steven Meadow-sweet	*Spiraea stevenii*	Secure			
Rosales – Saxifragaceae					**Rose-like plants – Saxifrages**
Northern Golden Saxifrage	*Chrysosplenium tetrandrum*	Secure			
Wright Golden Saxifrage	*Chrysosplenium wrightii*	Sensitive			
Richardson Alumroot	*Heuchera richardsonii*	May Be At Risk	L		
Leather-leaved Saxifrage	*Leptarrhena pyrolifolia*	May Be At Risk	L		
Bare-Stem Bishop's Cap	*Mitella nuda*	Secure			
Fringed Grass-of-parnassus	*Parnassia fimbriata*	Sensitive			
Kotzebue's Grass-of-parnassus	*Parnassia kotzebuei*	Secure			
Marsh Grass-of-parnassus	*Parnassia palustris*	Secure			
Asending Saxifrage	*Saxifraga adscendens*	Sensitive	L		
Yellow Mountain Saxifrage	*Saxifraga aizoides*	Secure			
Matte Saxifrage	*Saxifraga bronchialis*	May Be At Risk	L		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Tufted Saxifrage	*Saxifraga caespitosa*	Secure			
Nodding Saxifrage	*Saxifraga cernua*	Secure			
Cushion Saxifrage	*Saxifraga eschscholtzii*	May Be At Risk	L		
Rusty-Hair Saxifrage	*Saxifraga ferruginea*	May Be At Risk	L		
Spider Saxifrage	*Saxifraga flagellaris*	Secure			
Leafy Saxifrage	*Saxifraga foliolosa*	Secure			
Stiff Stem Saxifrage	*Saxifraga hieraciifolia*	Secure			
Yellow Marsh Saxifrage	*Saxifraga hirculus*	Secure			
Red Stemmed Saxifrage	*Saxifraga lyallii*	Sensitive			
Heart-leaved Saxifrage	*Saxifraga nelsoniana*	Secure			
Snow Saxifrage	*Saxifraga nivalis*	Secure			
Purple Mountain Saxifrage	*Saxifraga oppositifolia*	Secure			
White Mountain Saxifrage	*Saxifraga paniculata*	May Be At Risk	L		
Razshivin's Saxifrage	*Saxifraga razshivinii*	Secure			
Yukon Saxifrage	*Saxifraga reflexa*	Secure			
Alpine Brook Saxifrage	*Saxifraga rivularis*	Secure			
Thyme-leaf Saxifrage	*Saxifraga serpyllifolia*	Sensitive			
Siberian Saxifrage	*Saxifraga sibirica*	Secure			
Ottertail Pass Saxifrage	*Saxifraga tenuis*	Undetermined	L		
Prickly Saxifrage	*Saxifraga tricuspidata*	Secure	L		
Rubiales – Rubiaceae				**Bedstraw-like plants – Bedstraws**	
Catchweed Bedstraw	*Galium aparine*	Alien	X		
Northern Bedstraw	*Galium boreale*	Secure			
Boreal Bedstraw	*Galium kamtschaticum*	Undetermined	L		
Bog Bedstraw	*Galium labradoricum*	Secure			
Small Bedstraw	*Galium trifidum*	Secure			
Fragrant Bedstraw	*Galium triflorum*	Secure			
Salicales – Salicaceae				**Willow-like shrubs and trees – Willows and relatives**	
Balsam Poplar	*Populus balsamifera*	Secure			
Trembling Aspen	*Populus tremuloides*	Secure			
Alaska Willow	*Salix alaxensis*	Secure			
Littletree Willow	*Salix arbusculoides*	Secure			
Arctic Willow	*Salix arctica*	Secure			
Northern Willow	*Salix arctophila*	Secure			
Athabasca Willow	*Salix athabascensis*	Secure			
Barclay Willow	*Salix barclayi*	Secure			
Barratt Willow	*Salix barrattiana*	Secure			
Bebb Willow	*Salix bebbiana*	Secure			
Short-fruit Willow	*Salix brachycarpa*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Hoary Willow	*Salix candida*	Secure			
Chamisso's Willow	*Salix chamissonis*	Sensitive	L		
Undergreen Willow	*Salix commutata*	Sensitive	L		
Pussy Willow	*Salix discolor*	Sensitive	L		
Drummond's Willow	*Salix drummondiana*	Undetermined	L	E	
Yellow Willow	*Salix famelica*	Secure			
Farr's Willow	*Salix farriae*	May Be At Risk	L	I	
Alaska Bog Willow	*Salix fuscescens*	Secure			
Gray Willow	*Salix glauca*	Secure			
Halberd Willow	*Salix hastata*	Sensitive	L		
Snowbed Willow	*Salix herbacea*	Secure			
Sandbar Willow	*Salix interior*	Secure			
Shining Willow	*Salix lasiandra*	Secure			
Mccalla Willow	*Salix maccalliana*	Secure			
Blueberry Willow	*Salix myrtillifolia*	Secure			
Barren-ground Willow	*Salix niphoclada*	Secure			
Oval-leaved willow	*Salix ovalifolia*	May Be At Risk	L		
Bog Willow	*Salix pedicellaris*	Secure			
Meadow Willow	*Salix petiolaris*	Sensitive			
Skeleton-leaved Willow	*Salix phlebophylla*	Secure			
Diamond-leaved Willow	*Salix planifolia*	Secure			
Polar Willow	*Salix polaris*	Secure			
Mackenzie Willow	*Salix prolixa*	Secure			
False Mountain Willow	*Salix pseudomonticola*	Secure			
Firm-leaf Willow	*Salix pseudomyrsinites*	Undetermined			
Tea-leaved Willow	*Salix pulchra*	Secure			
Balsam Willow	*Salix pyrifolia*	Secure			
Raup's Willow	*Salix raupii*	May Be At Risk	L		G2 - 2008
Net-veined Willow	*Salix reticulata*	Secure			
Richardson Willow	*Salix richardsonii*	Secure			
Round-leaved Willow	*Salix rotundifolia*	Secure			
Scouler Willow	*Salix scouleriana*	Secure			
Autumn Willow	*Salix serissima*	Secure			
Wedgeleaf Willow	*Salix sphenophylla*	May Be At Risk	L		
Tyrell's Willow	*Salix tyrrellii*	May Be At Risk	L	T	Not at Risk - 1999
Santalales – Santalaceae					**Sandalwood-like plants – Toadflaxes and relatives**
Bastard Toadflax	*Comandra umbellata*	Undetermined	L		
Northern Comandra	*Geocaulon lividum*	Secure			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Sapindales – Aceraceae					**Maple-like trees – Maples**
Manitoba Maple	*Acer negundo*	Alien	X		
Scrophulariales – Lentibulariaceae					**Figwort-like plants – Butterworts and relatives**
Hairy Butterwort	*Pinguicula villosa*	Secure			
Common Butterwort	*Pinguicula vulgaris*	Secure			
Flatleaf Bladderwort	*Utricularia intermedia*	Secure			
Greater Bladderwort	*Utricularia macrorhiza*	Secure			
Lesser Bladderwort	*Utricularia minor*	Sensitive			
Northern Bladderwort	*Utricularia ochroleuca*	Sensitive		3	
Scrophulariales – Orobanchaceae					**Figwort-like plants – Broom-rapes and relatives**
Northern Groundcone	*Boschniakia rossica*	Secure			
Scrophulariales – Scrophulariaceae					**Figwort-like plants – Figworts and relatives**
Alpine Bartsia	*Bartsia alpina*	Undetermined	L		
Pale Indian Paintbrush	*Castilleja caudata*	Secure			
Elegant Indian Paintbrush	*Castilleja elegans*	Secure			
Northern Indian Paintbrush	*Castilleja hyperborea*	Sensitive			
Raup Indian Paintbrush	*Castilleja raupii*	Secure			
Yukon Indian Paintbrush	*Castilleja yukonis*	May Be At Risk	L		G3? - 2006
Dwarf Snapdragon	*Chaenorhinum minus*	Alien	X		
Arctic Eyebright	*Euphrasia subarctica*	Sensitive			
Little Weaselsnout	*Lagotis minor*	Sensitive	L		
Northern Mudwort	*Limosella aquatica*	May Be At Risk			
Butter-and-Eggs	*Linaria vulgaris*	Alien	X		
Common Large Monkey Flower	*Mimulus guttatus*	May Be At Risk	L		
Yellow Owl's Clover	*Orthocarpus luteus*	May Be At Risk	L		
Capitate Lousewort	*Pedicularis capitata*	Secure			
Red-tip Lousewort	*Pedicularis flammea*	Sensitive			
Greenland Lousewort	*Pedicularis groenlandica*	Undetermined			
Hairy Lousewort	*Pedicularis hirsuta*	Undetermined			
Labrador Lousewort	*Pedicularis labradorica*	Secure			
Woolly Lousewort	*Pedicularis lanata*	Secure			
Langsdorf's Lousewort	*Pedicularis langsdorfii*	Secure			
Lapland Lousewort	*Pedicularis lapponica*	Secure			
Muskeg Lousewort	*Pedicularis macrodonta*	Sensitive		1	
Oeder's Lousewort	*Pedicularis oederi*	May Be At Risk	L		
Sudetan Lousewort	*Pedicularis sudetica*	Secure			
Whorled Lousewort	*Pedicularis verticillata*	May Be At Risk	L		
Gorman's Beardtongue	*Penstemon gormanii*	May Be At Risk			

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Reason for Change[b]	COSEWIC Status/ Global Conservation Concern[c]
Small-flowered Beardtongue	*Penstemon procerus*	Presence Expected			
Little Yellow Rattle	*Rhinanthus minor*	Secure			
Alaska Kitten-tail	*Synthyris borealis*	May Be At Risk	L		G3G4 - 1992
American Speedwell	*Veronica americana*	Sensitive			
Long-leaved Speedwell	*Veronica longifolia*	Alien			
Purslane Speedwell	*Veronica peregrina*	May Be At Risk			
Marsh Speedwell	*Veronica scutellata*	Sensitive			
Alpine Speedwell	*Veronica wormskjoldii*	Secure			
Solanales – Hydrophyllaceae					**Nightshade-like plants – Waterleaves**
Franklin's Phacelia	*Phacelia franklinii*	Secure			
Solanales – Menyanthaceae					**Nightshade-like plants – Buckbeans**
Bog Buckbean	*Menyanthes trifoliata*	Secure			
Solanales – Polemoniaceae					**Nightshade-like plants – Phlox and relatives**
Narrow-leaved Collomia	*Collomia linearis*[d]	Sensitive			
Hood's Phlox	*Phlox hoodii*	Undetermined			
Richarson's Phlox	*Phlox richardsonii*	Sensitive			
Tall Jacob's Ladder	*Polemonium acutiflorum*	Secure			
Northern Jacob's Ladder	*Polemonium boreale*	Secure			
Showy Jacob's Ladder	*Polemonium pulcherrimum*	Sensitive			
Theales – Elatinaceae					**Tea-like plants – Waterworts**
Long-stemmed Waterwort	*Elatine americana*	Undetermined	L		
Urticales – Urticaceae					**Nettle-like plants – Nettles**
Stinging Nettle	*Urtica dioica*	Secure			
Violales – Cistaceae					**Violet-like plants – Beacheaths**
Woolly Beach-heath	*Hudsonia tomentosa*	Sensitive			
Violales – Violaceae					**Violet-like plants – Violets**
Sand Violet	*Viola adunca*	Secure			
Canada Violet	*Viola canadensis*	Undetermined	L	3	
Northern Marsh Violet	*Viola epipsila*	Sensitive			
Smooth White Violet	*Viola macloskeyi*	Sensitive			
Northern Bog Violet	*Viola nephrophylla*	Sensitive			
Alpine Marsh Violet	*Viola palustris*	Sensitive			
Kidney-leaf White Violet	*Viola renifolia*	Secure			
Great-spurred Violet	*Viola selkirkii*	Undetermined		3	
Johnny-jump-up	*Viola tricolor*	Alien	X		

6.15 Vascular Plants

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT.

b Describes reasons for a change in status rank between 2006 and 2011. ↗: Increasing Risk, ↘: Decreasing Risk, ∃: Error correction, ∗: Species new to the NWT, T: Taxonomic change, ⓘ: Information added, TI: New rank category, A: Changed due to detailed assessment by COSEWIC since 2006. See Data Sources and Methods for more details.

c For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

d This species may have been introduced to the NWT.

e Slender Wild Rye (*Elymus trachycaulus*) has both native and introduced forms, both of which are apparently present in the NWT. This grass formed the majority of the seed mix applied in the 1980-90s along the pipeline to Norman Wells.

f Reed Canary Grass (*Phalaris arundinacea*) has both native and introduced forms (genotypes) that can be in the NWT.

g Two varieties of Common Reed (*Phragmites australis*) exists: one is native, the other one is alien. Although only the native variety appears to be present in the NWT, further investigations on the genetics of the NWT populations are needed.

h Two forms of Kentucky Bluegrass (*Poa pratensis*) exists: one is native, the other one is alien. Both forms may be present in the NWT, but most sites are considered introduced. The species is used extensively as lawn grass.

i *Puccinellia nuttalliana* includes the taxon formerly known as *Puccinellia deschampsioides*, which has a global conservation concern rank of "G3".

j Annual Ragweed (*Ambrosia artemisiifolia*) was recorded in the 1970s near Fort Smith; its continuous presence in the NWT is unclear.

k Common Sow Thistle (*Sonchus oleraceus*) was recorded in 1955 near Fort Simpson; its continuous presence in the NWT is unclear.

l Rocky Mountain Goosefoot (*Chenopodium salinum*) is treated as synonymous to *Chenopodium glaucum* (mostly alien species) in FNA vol. 4, but the only taxon present in the NWT is the native variety *C. glaucum var salinum*, and is listed here using its synonym. *C salinum*.

m *Betula nana* and *Betula glandulosa ssp. exilis* are treated as separate species in FNA Vol. 3. These taxa hybridize in the area where both occur, including in the NWT, and can be very difficult to distinguish.

n Nipple-seed Plantain (*Plantago major*) has both native and alien subspecies. Both forms can be in the NWT.

o Plants previously called *Potentilla uniflora* have been split into several new species: North American Gorodkov's Cinquefoil (*Potentilla subgorodkovii*), North American Vahl's Cinquefoil (*Potentilla subvahliana*), Vahl's Cinquefoil (*Potentilla vahliana*), Beringian Hairy Potentilla (*Potentilla villosula*), and One-flowered Cinquefoil (*Potentilla vulcanicola*). The rank of most of these taxa is under review.

p There is uncertainty on the identity of the taxa present in the NWT. Either Great Burnet (*Sanguisorba officinalis*, alien) is present, or Western Burnet (*Sanguisorba occidentalis*, native), or both.

1 Changed from At Risk

2 Changed from May Be at Risk

3 Changed from Sensitive

4 Changed from Secure

5 Changed from Undetermined

6 Changed from Not Assessed

7 Changed from Alien

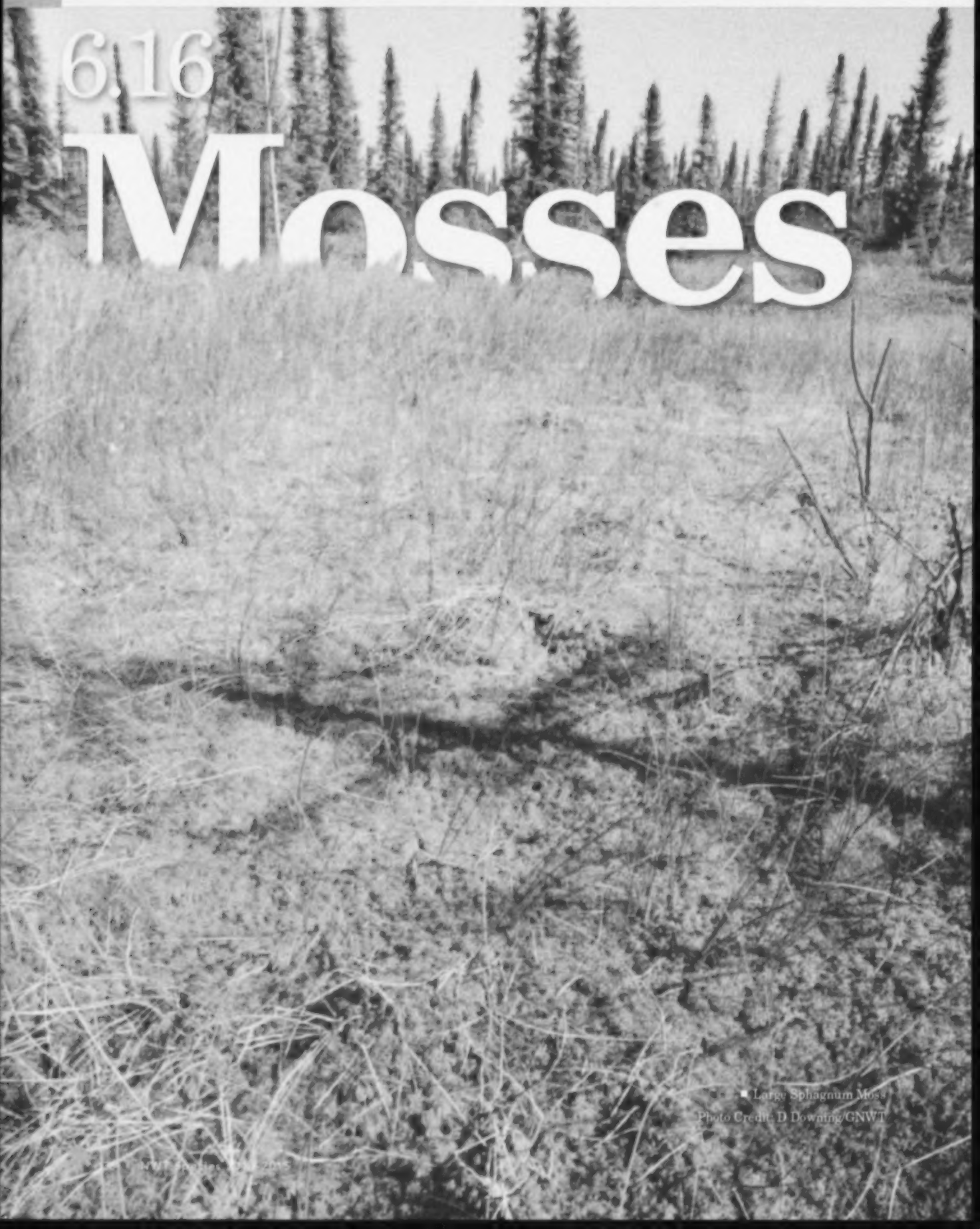
8 Changed from Extirpated

9 Changed from Vagrant

10 Changed from Presence Expected

■ Edward Mock Wallflower
Photo Credit: R Decker

6.16 Mosses



■ Large Sphagnum Moss
Photo Credit: D Downing/GNWT

Mosses are small, green, terrestrial plants that most people will usually associate with the tropics or coastal rainforest. Mosses are indeed a dominant plant type in those habitats, but also are able to grow in steppe desert or tundra habitats.

Mosses share many features with vascular plants, and they have unique adaptations that differentiate them from these. One of the most important characteristic is their lack of woody conducting tissue. Woody conducting tissues provide most plants, like trees, the rigidity and strength that allows them to grow to enormous size. As mosses lack this type of support, they remain small – the largest mosses in Canada are at most 20 cm tall and the smallest is less than 2 mm tall! Far from being a disadvantage, the small size allows mosses to grow in microhabitats. Microhabitats are mini-habitats that differ from the surrounding environment in humidity or moisture levels, light, temperature, or substrate. Examples of microhabitats include rock crevices, tree trunks, and rotting logs.

Although small, mosses play important roles in many ecosystems, from regulating drainage in peatlands, preventing erosion, providing shelter for insects and microorganisms in terrestrial environments and invertebrates in aquatic systems, and as pioneers in the development of soil after disturbance. They also have a strong influence on nutrient cycling in northern and tundra ecosystems through their role in nitrogen fixation and as filters for nutrients arriving in precipitation.

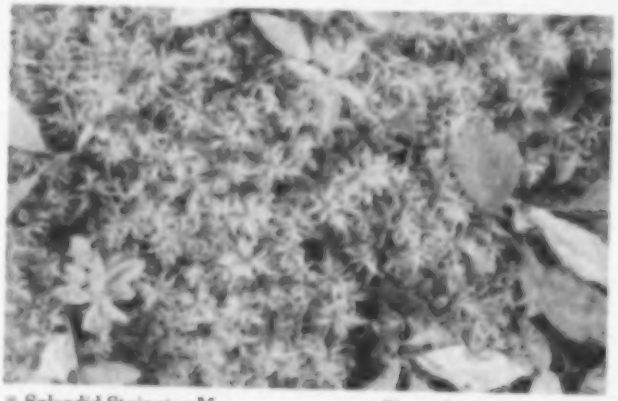
Aside from small size, another feature that is unique to mosses, among the plants at least, is an adaptation termed 'desiccation tolerance'. Desiccation tolerance allows mosses to dry out completely, but upon re-wetting, to become active and start growing again within minutes. Desiccation tolerance is an adaptation that allows many mosses to grow in places where most other plants cannot become established. This adaptation in mosses to rehydrate quickly was known to Aboriginal people, who used mosses in baby diapers and other absorbent tools (for examples see Inuvialuit Elders and Bandringa 2010). Also the insulation property of mosses has been used by northerners in building cabin roofs and walls. Sphagnum moss is used in gardens to enrich the soil. Some NWT landscaping businesses harvest mosses as a resource.

Landscapes with many varied habitats and a humid climate generally support higher numbers of mosses than landscapes dominated by few dry habitats. Mosses show highest diversity in the mountainous areas of the southwest NWT. These mountains have diverse climates that vary with elevation, in addition to diverse bedrock types. Large areas remain unexplored and poorly documented for their moss diversity. Effective conservation of mosses will depend on surveys to determine in some detail the moss diversity and their patterns on the land.

Dr. René Belland
Curator, Plant Herbarium
Devonian Botanic Garden
University of Alberta

List 16. Mosses

There are 498 species of mosses confirmed present in the NWT. Nine species are of global conservation concern. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows mainly Anderson et al. (1990), and Flora of North America (FNA 2007) for species not covered in Anderson et al. (1990). Common Names are from various sources.



▪ Splendid Stair-step Moss — Photo Credit: B Fournier

6.16 Mosses

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Andreaeales – Andreaeaceae			**Granite-moss Bryophytes – Granite Mosses**	
Blytt's Granite Moss	*Andreaea blyttii*	Undetermined		
Oval Granite Moss	*Andreaea obovata*	Secure		
Common Granite Moss	*Andreaea rupestris*	Secure		
Andreaeales – Andreaeobryaceae			**Granite-moss Bryophytes – Arctic Granite Mosses**	
Bigspore Arctic Granite Moss	*Andreaeobryum macrosporum*	May Be At Risk	L	G2G3 - 2009
Bryales – Aulacomniaceae			**True Moss-like Bryophytes – Groove Mosses**	
Acutetip Groove Moss	*Aulacomnium acuminatum*	Secure		G3? - 1999
Wetland Groove Moss	*Aulacomnium palustre*	Secure		
Fat Groove Moss	*Aulacomnium turgidum*	Secure		
Bryales – Bartramiaceae			**True Moss-like Bryophytes – Apple Mosses**	
Straight-leaved Apple Moss	*Bartramia ithyphylla*	Secure		
Common Apple Moss	*Bartramia pomiformis*	Sensitive	L	
Ranked-leaved Apple Moss	*Conostomum tetragonum*	Secure		
Capillary Apple Moss	*Philonotis capillaris*	Undetermined		
Fountain Apple Moss	*Philonotis fontana*	Undetermined	L	
Oeder Apple Moss	*Plagiopus oederiana*	Secure		
Bryales – Bryaceae			**True Moss-like Bryophytes – True Mosses**	
Thread-like Anomobryum Moss	*Anomobryum filiforme*	May Be At Risk	L	
Brazen Moss	*Bryum aeneum*	Undetermined		
Drooping-tread Moss	*Bryum algovicum*	Secure		
Arctic Moss	*Bryum arcticum*	Secure		
Silver Moss	*Bryum argenteum*	Secure		
Short Moss	*Bryum caespiticium*	Secure		
Matted Moss	*Bryum calophyllum*	Sensitive	L	
Capillary Moss	*Bryum capillare*	Secure		
Twisted-leaved Moss	*Bryum cyclophyllum*	Secure		
Overlaping-leaved Moss	*Bryum imbricatum*	Undetermined	L	
Knowlton's Moss	*Bryum knowltonii*	Sensitive	L	G3G4 - 1999
Lise Moss	*Bryum lisae*	Secure		
Polished Moss	*Bryum nitidulum*	Undetermined		
Pale Moss	*Bryum pallens*	Undetermined	L	
Pale-thread Moss	*Bryum pallescens*	Secure		
Tall Clustered Thread Moss	*Bryum pseudotriquetrum*	Secure		
Purple Moss	*Bryum purpurascens*	Secure		
Salt Moss	*Bryum salinum*	Secure		
Turned-thread Moss	*Bryum turbinatum*	Undetermined		
Weigel's Moss	*Bryum weigelii*	Secure		
Wright's Moss	*Bryum wrightii*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Flame-tread Moss	*Leptobryum pyriforme*	Secure		
Alpine Plagiobryum Moss	*Plagiobryum demissum*	May Be At Risk	L	
Zier's Plagiobryum Moss	*Plagiobryum zierii*	May Be At Risk	L	
Andalucia Thread-moss	*Pohlia andalusica*	Undetermined	L	
Andrew's Thread-moss	*Pohlia andrewsii*	Undetermined		
Pale-fruited Thread-moss	*Pohlia annotina*	Undetermined	L	
Purple Thread-moss	*Pohlia atropurpurea*	Undetermined	L	
Copper-thread-moss	*Pohlia bulbifera*	Undetermined	L	
Cardot's Thread-moss	*Pohlia cardotii*	May Be At Risk	L	
Glaucous Thread-moss	*Pohlia cruda*	Secure		
Mountain Thread-moss	*Pohlia crudoides*	May Be At Risk	L	
Drummond's Thread-moss	*Pohlia drummondii*	Undetermined	L	
Long Thread-moss	*Pohlia elongata*	Undetermined		
Erect Thread-moss	*Pohlia erecta*	Undetermined		
Thin Thread-moss	*Pohlia filum*	Undetermined	L	
Lescur Thread-moss	*Pohlia lescuriana*	Undetermined	L	
Long-necked Thread-moss	*Pohlia longicollis*	Sensitive	L	
Lugwig's Thread-moss	*Pohlia ludwigii*	Undetermined		
Common Thread-moss	*Pohlia nutans*	Secure		
Tundra Thread-moss	*Pohlia proligera*	Sensitive	L	
Vexans Thread-moss	*Pohlia vexans*	May Be At Risk	L	
Wahlenberg's Thread-moss	*Pohlia wahlenbergii*	Secure		
Bryales – Catoscopiaceae		**True Moss-like Bryophytes – Golfclub Mosses**		
Black Golfclub Moss	*Catoscopium nigritum*	Secure		
Bryales – Meesiaceae		**True Moss-like Bryophytes – Hump Mosses**		
Short-tooth Hump-moss	*Amblyodon dealbatus*	Undetermined	L	
Longstalk Hump-moss	*Meesia longiseta*	Undetermined	L	
Threeranked Hump-moss	*Meesia triquetra*	Secure		
Broadnerved Hump-moss	*Meesia uliginosa*	Secure		
Pipe-cleaner Moss	*Paludella squarrosa*	Secure		
Bryales – Mniaceae		**True Moss-like Bryophytes – Thyme-mosses**		
Arctic Cinclidium Moss	*Cinclidium arcticum*	Secure		
Large Cinclidium Moss	*Cinclidium latifolium*	Secure		
Style Cinclidium Moss	*Cinclidium stygium*	Secure		
Arrow Cinclidium Moss	*Cinclidium subrotundum*	Secure		
Flattened-leaved Cyrtomnium Moss	*Cyrtomnium hymenophylloides*	Secure		
Filmy-leaved Cyrtomnium Moss	*Cyrtomnium hymenophyllum*	Secure		
Confusing Thyme-moss	*Mnium ambiguum*	Undetermined	L	
Arizona Thyme-moss	*Mnium arizonicum*	Undetermined	L	

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Blytt's Thyme-moss	*Mnium blyttii*	Secure		
Olivegreen Thyme-moss	*Mnium marginatum*	Secure		
Spiny Thyme-moss	*Mnium spinosum*	Secure		
Small Spiny Thyme-moss	*Mnium spinulosum*	Undetermined	L	
Thomson's Thyme-moss	*Mnium thomsonii*	Secure		
Many-fruited Thyme-moss	*Plagiomnium affine*	Sensitive		
Hair Thyme-moss	*Plagiomnium ciliare*	Sensitive	L	
Pointed-leaved Thyme-moss	*Plagiomnium cuspidatum*	Sensitive		
Drummond's Thyme-moss	*Plagiomnium drummondii*	Sensitive	L	
Elliptic Thyme-moss	*Plagiomnium ellipticum*	Secure		
Medium Thyme-moss	*Plagiomnium medium*	Sensitive	L	
Beaked Thyme-moss	*Plagiomnium rostratum*	Sensitive	L	
Small-rounded Pseudobryum Moss	*Pseudobryum cinclidioides*	Sensitive	L	
Andrew Thyme-moss	*Rhizomnium andrewsianum*	Sensitive	L	
Gracile Thyme-moss	*Rhizomnium gracile*	Secure		
Showy Thyme-moss	*Rhizomnium magnifolium*	Undetermined	L	
Marked Thyme-moss	*Rhizomnium pseudopunctatum*	Secure		
Spotted Thyme-moss	*Rhizomnium punctatum*	Undetermined	L	
Bryales – Timmiaceae		True Moss-like Bryophytes – Timmia Mosses		
Austrian Timmia Moss	*Timmia austriaca*	Secure		
Megapolitan Timmia Moss	*Timmia megapolitana*	Secure	L	
Norwegian Timmia Moss	*Timmia norvegica*	Secure		
Siberian Timmia Moss	*Timmia sibirica*	Undetermined		
Dicranales – Bruchiaceae		Forkmoss-like Bryophytes – Pygmymosses		
Shortneck Trematodon Moss	*Trematodon brevicollis*	Sensitive	L	
Dicranales – Dicranaceae		Forkmoss-like Bryophytes – Fork Mosses and relatives		
Sand Hoofprint Moss	*Aongstroemia longipes*	May Be At Risk	L	
Anderson's Arctic-moss	*Arctoa anderssonii*	May Be At Risk	L	
Twinkle Mountian-moss	*Arctoa fulvella*	May Be At Risk	L	
Alpine Fork-moss	*Cynodontium alpestre*	Undetermined	L	
Pale Fork-moss	*Cynodontium glaucescens*	Sensitive	L	G3G4 - 1999
Gracile Fork-moss	*Cynodontium gracilescens*	Undetermined		
Jenner's Fork-moss	*Cynodontium jenneri*	Sensitive	L	
Polycarp Fork-moss	*Cynodontium polycarpon*	Undetermined		
Schist's Fork-moss	*Cynodontium schisti*	Sensitive	L	
Adam's Apple Fork-moss	*Cynodontium strumiferum*	Secure		
Tiny Fork-moss	*Cynodontium tenellum*	Sensitive	L	
Translucent Fork-moss	*Dichodontium pellucidum*	Undetermined	L	
Small Forklet-moss	*Dicranella cerviculata*	Undetermined	L	

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Dry Forklet-moss	*Dicranella crispa*	Secure		
Silky Forklet-moss	*Dicranella heteromalla*	Undetermined	L	
Lakeshore Forklet-moss	*Dicranella palustris*	Undetermined	L	
Schreberian Forklet-moss	*Dicranella schreberiana*	Secure		
Long-pointed Forklet-moss	*Dicranella subulata*	Undetermined	L	
Variable Forklet-moss	*Dicranella varia*	Undetermined	L	
Stripper Forktooth-moss	*Dicranodontium denudatum*	Undetermined		
Striated Fork-moss	*Dicranoweisia cirrata*	Undetermined	L	
Crisp-leaved Fork-moss	*Dicranoweisia crispula*	Secure		
Sharp-leaved Cushion Moss	*Dicranum acutifolium*	Secure		
Bonjean's Cushion Moss	*Dicranum bonjeanii*	Undetermined	L	
Short-leaved Cushion Moss	*Dicranum brevifolium*	Sensitive	L	
Long-leaved Cushion Moss	*Dicranum elongatum*	Secure		
Whip Cushion Moss	*Dicranum flagellare*	Undetermined		
Fragile Cushion Moss	*Dicranum fragilifolium*	Secure		
Dusky Cushion Moss	*Dicranum fuscescens*	Secure		
Greenland Cushion Moss	*Dicranum groenlandicum*	Secure		
Fuzzy Cushion Moss	*Dicranum leioneuron*	Undetermined		
Magic Cushion Moss	*Dicranum majus*	Undetermined	L	
Mountain Cushion Moss	*Dicranum montanum*	Undetermined		
Muehlenbeck's Cushion Moss	*Dicranum muehlenbeckii*	Undetermined	L	
Ontarian Cushion Moss	*Dicranum ontariense*	Undetermined		
Many-leaved Cushion Moss	*Dicranum polysetum*	Secure		
Broom Moss	*Dicranum scoparium*	Secure		
Spade Cushion Moss	*Dicranum spadiceum*	Secure		
Tauric Cushion Moss	*Dicranum tauricum*	Undetermined	L	
Stuffy Cushion Moss	*Dicranum undulatum*	Secure		
Blytt's Kiaeria Moss	*Kiaeria blyttii*	Sensitive	L	
Sickle Kiaeria Moss	*Kiaeria falcata*	Undetermined		
Glacier Kiaeria Moss	*Kiaeria glacialis*	Secure		
Stark's Kiaeria Moss	*Kiaeria starkei*	Sensitive	L	
Green Curred-back Moss	*Oncophorus virens*	Secure		
Mountain Curved-back Moss	*Oncophorus wahlenbergii*	Secure		
Small-leaved Pale Moss	*Paraleucobryum enerve*	Undetermined	L	
Long-leaved Pale Moss	*Paraleucobryum longifolium*	Undetermined	L	
Crisp Rhabdoweisia Moss	*Rhabdoweisia crispata*	May Be At Risk	L	
Dicranales – Ditrichaceae				**Forkmoss-like Bryophytes – Doubleleaf Mosses**
Double Tooth-moss	*Ceratodon heterophyllus*	Undetermined		
Purple Tooth-moss	*Ceratodon purpureus*	Secure		
Hairy Doubleleaf Moss	*Distichium capillaceum*	Secure		

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Hagen's Doubleleaf Moss	*Distichium hagenii*	Undetermined	L	
Inclined Doubleleaf Moss	*Distichium inclinatum*	Secure		
Flexible Doubleleaf Moss	*Ditrichum flexicaule*	Secure		
Gracile Doubleleaf Moss	*Ditrichum gracile*	Undetermined		
Pale Saelania Moss	*Saelania glaucescens*	Undetermined	L	
Cylindrical Triple-tooth Moss	*Trichodon cylindricus*	Undetermined	L	
Dicranales – Fissidentaceae		Forkmoss-like Bryophytes – Pocket Mosses		
Maidenhair Moss	*Fissidens adianthoides*	Sensitive	L	
Arctic Pocket Moss	*Fissidens arcticus*	Undetermined	L	
Bryoid Pocket Moss	*Fissidens bryoides*	Undetermined	L	
Large-leaved Pocket Moss	*Fissidens grandifrons*	Undetermined		
Osmond Pocket Moss	*Fissidens osmundoides*	Secure		
Serrulate Pocket Moss	*Fissidens taxifolius*	Undetermined		
Dicranales – Grimmiaceae		Forkmoss-like Bryophytes – Rock Mosses and relatives		
Northern Granite-moss	*Coscinodon arctolimnius*	Secure		
Toothed Granite-moss	*Coscinodon cribrosus*	Undetermined		
Plate Rock-moss	*Dryptodon patens*	Undetermined		
Toothless Rock-moss	*Grimmia anodon*	Secure		
White-haired Rock-moss	*Grimmia crinitoleucophaea*	Undetermined		
Donniana Rock-moss	*Grimmia donniana*	Undetermined		
Long Rock-moss	*Grimmia elongata*	Undetermined		
Spurred Rock-moss	*Grimmia longirostris*	Undetermined	L	
Footed Rock-moss	*Grimmia plagiopodia*	Undetermined		
Cliff Rock-moss	*Grimmia sessitana*	Undetermined	L	
Dry Rock-moss	*Grimmia teretinervis*	Undetermined		
Torque Rock-moss	*Grimmia torquata*	May Be At Risk	L	
Splash Rock-moss	*Grimmia unicolor*	May Be At Risk	L	
Grey Fringe-moss	*Racomitrium canescens*	Secure		
Heath Fringe-moss	*Racomitrium ericoides*	Undetermined	L	
Mountain Green Fringe-moss	*Racomitrium fasciculare*	Undetermined	L	
Bristly Fringe-moss	*Racomitrium heterostichum*	Secure		
Awned Fringe-moss	*Racomitrium lanuginosum*	Secure		
Microcarpe Fringe-moss	*Racomitrium microcarpon*	Undetermined		
Slender Fringe-moss	*Racomitrium sudeticum*	May Be At Risk	L	
Agassiz's Fringe-moss	*Schistidium agassizii*	Undetermined	L	
Reddish Fringe-mos	*Schistidium apocarpum*	Secure		
Boreal Fringe-moss	*Schistidium boreale*	Undetermined		
Curved Fringe-moss	*Schistidium cryptocarpum*	Undetermined		
Dupret's Fringe-moss	*Schistidium dupretii*	Undetermined		
Arctic Fringe-moss	*Schistidium frigidum*	Undetermined		

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Unruly Fringe-moss	*Schistidium frisvoltianum*	Undetermined		
Grand Fringe-moss	*Schistidium grandirete*	Undetermined		
Holmen Fringe-moss	*Schistidium holmenianum*	Undetermined		
Moth Fringe-moss	*Schistidium papillosum*	Undetermined		
Handsome Fringe-moss	*Schistidium pulchrum*	Undetermined		
Wavy Fringe-moss	*Schistidium rivulare*	Secure		
Robust Fringe-moss	*Schistidium robustum*	Undetermined		
Soft Fringe-moss	*Schistidium tenerum*	Sensitive	L	
Darkolive Schistidium Moss	*Schistidium trichodon*	May Be At Risk	L	
Arctic Schistidium Moss	*Schistidium venetum*	Undetermined		
Dicranales – Scouleriaceae			Forkmoss-like Bryophytes – Scouler Mosses	
Aquatic Scouler Moss	*Scouleria aquatica*	Undetermined		
Dicranales – Seligeriaceae			Forkmoss-like Bryophytes – Limestone Mosses	
Acute Blindia Moss	*Blindia acuta*	Secure		
Calcareous Moss	*Seligeria calcarea*	Sensitive		
Campylope Limestone Moss	*Seligeria campylopoda*	May Be At Risk	L	
Mountian Limestone Moss	*Seligeria donniana*	Secure		
Irish Rock-bristle	*Seligeria oelandica*	May Be At Risk	L	
Polar Limestone Moss	*Seligeria polaris*	May Be At Risk	L	
Small Limestone Moss	*Seligeria subimmersa*	May Be At Risk	L	
Three-ranked Limestone Moss	*Seligeria tristichoides*	Undetermined	L	
Funariales – Disceliaceae			Ropemoss-like Bryophytes – Flag-mosses	
Naked Flag-moss	*Discelium nudum*	May Be At Risk	L	G3G4 - 1999
Funariales – Ephemeraceae			Ropemoss-like Bryophytes – Ephemeral Mosses	
Serrated Ephemeral Moss	*Ephemerum serratum*	Undetermined		
Funariales – Funariaceae			Ropemoss-like Bryophytes – Rope-mosses	
Inuit Rope-moss	*Funaria arctica*	May Be At Risk	L	
Wet Rope-moss	*Funaria hygrometrica*	Secure		
Small Rope-moss	*Funaria microstoma*	Undetermined		
Polar Rope-moss	*Funaria polaris*	May Be At Risk	L	
Funariales – Pseudoditrichaceae			Ropemoss-like Bryophytes – Pseudoditrichum Mosses	
Great Bear Lake Double-rope Moss	*Pseudoditrichum mirabile*	Undetermined		
Funariales – Splachnaceae			Ropemoss-like Bryophytes – Dung Mosses	
Wormskjold's Aplodon Moss	*Aplodon wormskjoldii*	Undetermined	L	
Yellow Splach Moss	*Splachnum luteum*	Sensitive	L	G3 - 1999
Red Splach Moss	*Splachnum rubrum*	Undetermined	L	
Pink Splach Moss	*Splachnum sphaericum*	Secure		
Rugged Collar-moss	*Splachnum vasculosum*	Sensitive	L	
Pointed Taylor Moss	*Tayloria acuminata*	Undetermined		

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Froelich's Taylor Moss	*Tayloria froelichiana*	Undetermined	L	
Tongued Taylor Moss	*Tayloria lingulata*	Undetermined	L	
Toothed-leaf Nitrogen Moss	*Tetraplodon angustatus*	Sensitive	L	
Thyme Nitrogen Moss	*Tetraplodon mnioides*	Secure		
Pale Nitrogen Moss	*Tetraplodon pallidus*	Undetermined	L	
Paradox Nitrogen Moss	*Tetraplodon paradoxus*	Sensitive	L	
Urceolate Nitrogen Moss	*Tetraplodon urceolatus*	Secure		
Northern Voitia Moss	*Voitia hyperborea*	Undetermined	L	
Hypnales – Amblystegiaceae		Feathermoss-like Bryophytes – Feather-mosses		
Creeping Feather-moss	*Amblystegium serpens*	Secure		
Willow Feather-moss	*Amblystegium varium*	Sensitive	L	
Heart-leaved Spear-moss	*Calliergon cordifolium*	Secure		
Gigantic Spear-moss	*Calliergon giganteum*	Secure		
Large Spear-moss	*Calliergon megalophyllum*	Undetermined		
Corded Spear-moss	*Calliergon orbiculare-cordatum*	Undetermined	L	
Richardson's Spear-moss	*Calliergon richardsonii*	Secure		
Straw Spear-moss	*Calliergon stramineum*	Secure		
Triton Spear-moss	*Calliergon trifarium*	Secure		
Pointed Spearlet-moss	*Calliergonella cuspidata*	Undetermined		
Golden Feather-moss	*Campylium chrysophyllum*	Secure		
Haller's Feather-moss	*Campylium halleri*	Undetermined	L	
Hispid Feather-moss	*Campylium hispidulum*	Secure		
Fertile Feather-moss	*Campylium polygamum*	Undetermined	L	
Round Feather-moss	*Campylium radicale*	Sensitive	L	
Yellow Starry Feather-moss	*Campylium stellatum*	Secure		
Compact Feather-moss	*Conardia compacta*	Secure		
Thread Feather-moss	*Cratoneuron filicinum*	Secure		
Knieff's Hook-moss	*Drepanocladus aduncus*	Secure		
Short Hook-moss	*Drepanocladus brevifolius*	Secure		
Capillary Hook-moss	*Drepanocladus capillifolius*	Undetermined		
Large Hook-moss	*Drepanocladus latifolius*	Undetermined		
Dusky Hook-moss	*Drepanocladus sordidus*	Undetermined		
Lapland Hook-moss	*Hamatocaulis lapponicus*	Undetermined		
Varnished Hook-moss	*Hamatocaulis vernicosus*	Secure		
Fountain Feather-moss	*Hygroamblystegium tenax*	Sensitive	L	
Alpine Brook-moss	*Hygrohypnum alpestre*	Undetermined		
Broad-leaved Brook-moss	*Hygrohypnum eugyrium*	Undetermined		
Drab Brook-moss	*Hygrohypnum luridum*	Secure		
Ochre Brook-moss	*Hygrohypnum ochraceum*	Undetermined	L	
Polar Brook-moss	*Hygrohypnum polare*	Sensitive	L	

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Snow Brook-moss	*Hygrohypnum styriacum*	Undetermined	L	
Stringy Moss	*Leptodictyum riparium*	Secure		
Cosson's Hook-moss	*Limprichtia cossonii*	Undetermined	L	
Rusty Hook-moss	*Limprichtia revolvens*	Secure		
Arctic Loeskypnum Moss	*Loeskypnum badium*	Secure		
Curled Hook-moss	*Palustriella commutata*	Undetermined	L	
Falcata Hook-moss	*Palustriella falcata*	Undetermined	L	
Fat Spear-moss	*Pseudocalliergon turgescens*	Secure		
Georgico Hook-moss	*Sanionia georgico-uncinata*	Undetermined		
St Kilda Hook-moss	*Sanionia orthothecioides*	Undetermined		
Sickle-leaved Hook-moss	*Sanionia uncinata*	Secure		
Twiggy Spear-moss	*Sarmentypnum sarmentosum*	Secure		
Hooked Scorpion-moss	*Scorpidium scorpioides*	Secure		
Ringless Hook-moss	*Warnstorfia exannulata*	Secure		
Floating Hook-moss	*Warnstorfia fluitans*	Secure		
Staminate Hook-moss	*Warnstorfia pseudostraminea*	Undetermined		
Tricorne Hook-moss	*Warnstorfia trichophylla*	Undetermined		
Tundra Hook-moss	*Warnstorfia tundrae*	Undetermined	L	
Hypnales – Brachytheciaceae		Feathermoss-like Bryophytes – Ragged-mosses		
Whitish Ragged-moss	*Brachythecium albicans*	Secure		
Calcareous Ragged-moss	*Brachythecium calcareum*	Undetermined		
Field Ragged-moss	*Brachythecium campestre*	Undetermined	L	
Hill Ragged-moss	*Brachythecium collinum*	Secure		
Red-foot Ragged-moss	*Brachythecium erythrorrhizon*	Undetermined		
Northern Ragged-moss	*Brachythecium frigidum*	Undetermined		
Glacier Ragged-moss	*Brachythecium glaciale*	May Be At Risk	L	
Greenland Ragged-moss	*Brachythecium groenlandicum*	Undetermined	L	
Lelgerg's Ragged-moss	*Brachythecium leibergii*	Undetermined	L	
Sand Ragged-moss	*Brachythecium mildeanum*	Undetermined		
Nelson's Ragged-moss	*Brachythecium nelsonii*	Undetermined		
Oedipodium Ragged-moss	*Brachythecium oedipodium*	Undetermined	L	
Feathered Ragged-moss	*Brachythecium plumosum*	Undetermined	L	
Flexible Ragged-moss	*Brachythecium reflexum*	Undetermined	L	
River Ragged-moss	*Brachythecium rivulare*	Undetermined		
Roughstalked Ragged-moss	*Brachythecium rutabulum*	Undetermined		
Golden Ragged-moss	*Brachythecium salebrosum*	Secure		
Trachypodium Ragged-moss	*Brachythecium trachypodium*	Undetermined	L	
Turgid Ragged-moss	*Brachythecium turgidum*	Secure		
Velvet Ragged-moss	*Brachythecium velutinum*	Secure		
Tendril Feather-moss	*Cirriphyllum cirrosum*	Secure		

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Elegant Feather-moss	*Eurhynchium pulchellum*	Secure		
Dark Beaked Moss	*Steerecleus serrulatus*	Sensitive	L	
Sickleleaf Feather-moss	*Tomentypnum falcifolium*	Undetermined		
Wolly Feather-moss	*Tomentypnum nitens*	Secure		
Hypnales – Entodontaceae		Feathermoss-like Bryophytes – Silk Mosses		
Cladorrhizans Silk Moss	*Entodon cladorrhizans*	Sensitive	L	
Trim Silk Moss	*Entodon concinnus*	May Be At Risk	L	
Schleicher's Silk Moss	*Entodon schleicheri*	May Be At Risk	L	Data Deficient - 2005
Hypnales – Fontinalaceae		Feathermoss-like Bryophytes – Water-mosses		
Sickle Diving-moss	*Dichelyma falcatum*	May Be At Risk		
Aquatic Water-moss	*Fontinalis dalecarlica*	Undetermined	L	
Wetmat Water-moss	*Fontinalis hypnoides*	Undetermined	L	
Hypnales – Helodiaceae		Feathermoss-like Bryophytes – Bog-mosses		
Blandow's Bog-moss	*Helodium blandowii*	Undetermined	L	
Hypnales – Hylocomiaceae		Feathermoss-like Bryophytes – Stair-step mosses and relatives		
Pyrenean Wood-moss	*Hylocomiastrum pyrenaicum*	Undetermined		
Slendid Stair-step Moss	*Hylocomium splendens*	Secure		
Schreber's Stair-step Moss	*Pleurozium schreberi*	Secure		
Springy Turf-moss	*Rhytidiadelphus squarrosus*	Undetermined	L	
Scarce Turf-moss	*Rhytidiadelphus subpinnatus*	Undetermined		
Big Shaggy-moss	*Rhytidiadelphus triquetrus*	Undetermined	L	
Hypnales – Hypnaceae		Feathermoss-like Bryophytes – Plait-mosses		
Chalk Comb-moss	*Ctenidium molluscum*	Undetermined		
Turfmaking Feather-moss	*Herzogiella turfacea*	Sensitive	L	
Bamberger's Feather-moss	*Hypnum bambergeri*	Secure		
Callichroum Feather-moss	*Hypnum callichroum*	Sensitive	L	
Cypress-leaved Plait-moss	*Hypnum cupressiforme*	Secure		
Yellow Plait-moss	*Hypnum hamulosum*	Secure		
Holmen Feather-moss	*Hypnum holmenii*	Secure		
Log Feather-moss	*Hypnum imponens*	Undetermined	L	
Lindberg's Feather-moss	*Hypnum lindbergii*	Secure		
Pale Plait-moss	*Hypnum pallescens*	Sensitive	L	
Plaited Feather-moss	*Hypnum plicatulum*	Secure		
Meadow Feather-moss	*Hypnum pratense*	Secure		
Northern Feather-moss	*Hypnum procerrimum*	Secure		
Curved Feather-moss	*Hypnum recurvatum*	Undetermined	L	
Revolute Feather-moss	*Hypnum revolutum*	Secure		
Subimponens Feather-moss	*Hypnum subimponens*	Sensitive	L	
Vaucher's Feather-moss	*Hypnum vaucheri*	Secure		

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Mueller Feather-moss	*Isopterygiopsis muelleriana*	May Be At Risk	L	
Neat Feather-moss	*Isopterygiopsis pulchella*	Secure		
Acuminate Feather-moss	*Orthothecium acuminatum*	Undetermined		
Golden Feather-moss	*Orthothecium chryseum*	Secure		
Intricate Feather-moss	*Orthothecium intricatum*	Sensitive	L	
Red Feather-moss	*Orthothecium rufescens*	Undetermined		
Strict Feather-moss	*Orthothecium strictum*	Sensitive	L	
Jungerman Brocade-moss	*Platydictya jungermannioides*	Secure		
Flat Brocade-moss	*Platygyrium repens*	May Be At Risk	L	
Ostrich-plume Feather-moss	*Ptilium crista-castrensis*	Secure		
Many-flowered Feather-moss	*Pylaisiella polyantha*	Secure		
Selwyn's Feather-moss	*Pylaisiella selwynii*	Undetermined		
Hypnales – Myriniaceae		Feathermoss-like Bryophytes – Myrinia Mosses		
Flood Moss	*Myrinia pulvinata*	Sensitive	L	
Hypnales – Neckeraceae		Feathermoss-like Bryophytes – Neckera Mosses		
Feathered Neckera Moss	*Neckera pennata*	Sensitive	L	
Hypnales – Plagiotheciaceae		Feathermoss-like Bryophytes – Flat-mosses		
Berggren Flat-moss	*Plagiothecium berggrenianum*	Undetermined		
Roundish Flat-moss	*Plagiothecium cavifolium*	Undetermined	L	
Dented Flat-moss	*Plagiothecium denticulatum*	Undetermined	L	
Bright Flat-moss	*Plagiothecium laetum*	Secure		
Hair Flat-moss	*Plagiothecium piliferum*	Undetermined	L	
Hypnales – Rhytidiaceae		Feathermoss-like Bryophytes – Glade-mosses		
Golden Glade-moss	*Rhytidium rugosum*	Secure		
Hypnales – Thuidiaceae		Feathermoss-like Bryophytes – Fern-mosses		
True Fir-moss	*Abietinella abietina*	Secure		
Delicate Fern-moss	*Thuidium delicatulum*	Undetermined	L	
Lesser Fern-moss	*Thuidium recognitum*	Undetermined		
Isobryales – Climaciaceae		Isometric Moss-like Bryophytes – Tree-mosses		
Thoothed Tree-moss	*Climacium dendroides*	Secure		
Isobryales – Hedwigiaceae		Isometric Moss-like Bryophytes – Hoar-mosses		
Fringed Hoar-moss	*Hedwigia ciliata*	Undetermined	L	
Isobryales – Leskeaceae		Isometric Moss-like Bryophytes – Leskea Mosses		
Nerved Little-leskea	*Leskeella nervosa*	Secure		
Brown Mountain Leskea	*Pseudoleskea incurvata*	Undetermined	L	
Patent Leskea	*Pseudoleskea patens*	Undetermined	L	
Radicose Leskea	*Pseudoleskea radicosa*	Undetermined	L	
Narrow-leaved Leskea	*Pseudoleskea stenophylla*	May Be At Risk	L	
Butterfly Little-leskea	*Pseudoleskeella papillosa*	Undetermined		
Downy Little-leskea	*Pseudoleskeella tectorum*	Secure		

6.16 Mosses

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Isobryales – Pterigynandraceae		**Isometric Moss-like Bryophytes – Wing-mosses**		
Small Mouse-tail Moss	*Myurella julacea*	Secure		
Siberian Mouse-tail Moss	*Myurella sibirica*	Undetermined		
Dwarf Mouse-tail Moss	*Myurella tenerrima*	Secure		G3G4 - 1999
String Wing-moss	*Pterigynandrum filiforme*	Undetermined	L	
Orthotrichales – Orthotrichaceae		**Bristle Moss-like Bryophytes – Bristle-mosses**		
Lapland Yoke-moss	*Amphidium lapponicum*	Secure		
Mougeot's Yoke-moss	*Amphidium mougeotii*	Undetermined	L	
Alpine Bristle-moss	*Orthotrichum alpestre*	Sensitive	L	
Anomalous Bristle-moss	*Orthotrichum anomalum*	Undetermined	L	
Hooded Bristle-moss	*Orthotrichum cupulatum*	Sensitive	L	
Smooth Bristle-moss	*Orthotrichum laevigatum*	Sensitive	L	
Blunt-leaved Bristle-moss	*Orthotrichum obtusifolium*	Sensitive	L	
Pale Bristle-moss	*Orthotrichum pallens*	Sensitive	L	
Translucent Bristle-moss	*Orthotrichum pellucidum*	Sensitive	L	
Pylaïs' Bristle-moss	*Orthotrichum pylaisii*	Sensitive	L	
Rupestre Bristle-moss	*Orthotrichum rupestre*	Undetermined		
Dark Bristle-moss	*Orthotrichum sordidum*	Undetermined		
Showy Bristle-moss	*Orthotrichum speciosum*	Secure		
Curved-leaf Ulota Moss	*Ulota curvifolia*	Secure		
Polytrichales – Buxbaumiaceae		**Haircap Moss-like Bryophytes – Elfcap Mosses**		
Leafless Elfcap Moss	*Buxbaumia aphylla*	May Be At Risk	L	
Polytrichales – Polytrichaceae		**Haircap Moss-like Bryophytes – Haircap Mosses**		
Selwyn's Atrichum Moss	*Atrichum selwynii*	Undetermined	L	
Small Atrichum Moss	*Atrichum tenellum*	Undetermined	L	
Sickle Few-haircap Moss	*Oligotrichum falcatum*	May Be At Risk	L	
Dented Haircap Moss	*Pogonatum dentatum*	Undetermined	L	
Urn Haircap Moss	*Pogonatum urnigerum*	Undetermined	L	
Alpine Haircap Moss	*Polytrichastrum alpinum*	Secure		
Common Haircap Moss	*Polytrichum commune*	Secure		
Bank Haircap Moss	*Polytrichum formosum*	Undetermined	L	
Arctic Haircap Moss	*Polytrichum hyperboreum*	Sensitive	L	
Jensen's Haircap Moss	*Polytrichum jensenii*	Undetermined		
Juniper Haircap Moss	*Polytrichum juniperinum*	Secure		
Slender Haircap Moss	*Polytrichum longisetum*	Undetermined	L	
Lyall's Haircap Moss	*Polytrichum lyallii*	Undetermined	L	
Bristly Haircap Moss	*Polytrichum piliferum*	Secure		
Six-ranked Haircap Moss	*Polytrichum sexangulare*	May Be At Risk	L	

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Strict Haircap Moss	*Polytrichum strictum*	Secure		
Swartz's Haircap Moss	*Polytrichum swartzii*	Undetermined		
Cup Haircap Moss	*Psilopilum cavifolium*	Secure		
Bald Haircap Moss	*Psilopilum laevigatum*	May Be At Risk	L	
Polytrichales – Tetraphidaceae		Haircap Moss-like Bryophytes – Tetraphid Mosses		
Pellucid Four-tooth Moss	*Tetraphis pellucida*	Undetermined	L	
Pottiales – Encalyptaceae		Potia Moss-like Bryophytes – Candlesnuffer Mosses		
Long Britton-moss	*Bryobrittonia longipes*	Sensitive	L	
Fine Candlesnuffer	*Encalypta affinis*	Sensitive	L	
Alpine Candlesnuffer	*Encalypta alpina*	Secure		
Short-necked Candlesnuffer	*Encalypta brevicollis*	Sensitive	L	
Fringed Candlesnuffer	*Encalypta ciliata*	Sensitive	L	
Intermediate Candlesnuffer	*Encalypta intermedia*	May Be At Risk	L	
Long-necked Candlesnuffer	*Encalypta longicolla*	May Be At Risk	L	
Blunt Candlesnuffer	*Encalypta mutica*	May Be At Risk	L	
Tall Candlesnuffer	*Encalypta procera*	Secure		
Ribbed Candlesnuffer	*Encalypta rhaptocarpa*	Secure		
Alpine Candlesnuffer	*Encalypta vittiana*	May Be At Risk	L	
Common Candlesnuffer	*Encalypta vulgaris*	Undetermined	L	
Pottiales – Pottiaceae		Pottia Moss-like Bryophytes – Pottia Mosses		
Short-beaked Aloe-moss	*Aloina brevirostris*	Sensitive	L	
Rigid Aloe-moss	*Aloina rigida*	Sensitive	L	
Ample Beard-moss	*Barbula amplexifolia*	Undetermined	L	
Convolute Beard-moss	*Barbula convoluta*	Undetermined	L	
Indica Beard-moss	*Barbula indica*	Undetermined		
Bird's-claw Beard-moss	*Barbula unguiculata*	Undetermined	L	
Rufous Beard-moss	*Bryoerythrophyllum ferruginascens*	Undetermined	L	
Curved Beard-moss	*Bryoerythrophyllum recurvirostre*	Secure		
Brush Beard-moss	*Didymodon asperifolius*	Secure		
False Beard-moss	*Didymodon fallax*	Undetermined	L	
Reddish Beard-moss	*Didymodon ferrugineus*	Undetermined	L	
Gigantic Beard-moss	*Didymodon giganteus*	Undetermined	L	
Johansen's Beard-moss	*Didymodon johansenii*	Undetermined		
Leskea-like Beard-moss	*Didymodon leskeoides*	Undetermined		
Maschalogena Beard-moss	*Didymodon maschalogena*	Undetermined		
Big Beard-moss	*Didymodon maximus*	Undetermined		
Black Beard-moss	*Didymodon nigrescens*	Undetermined	L	
Very Short Beard-moss	*Didymodon perobtusus*	Undetermined		
Rigid Beard-moss	*Didymodon rigidulus*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Andrew Beard-moss	*Didymodon subandreaeoides*	Sensitive	L	
Gritty Beard-moss	*Didymodon tophaceus*	Undetermined	L	
Vine-like Beard-moss	*Didymodon vinealis*	Undetermined	L	
Whorled Tufa-moss	*Eucladium verticillatum*	Undetermined		
Verdegris Tufa-moss	*Gymnostomum aeruginosum*	Undetermined	L	
Slender Stubble-moss	*Gyroweisia tenuis*	May Be At Risk	L	
Heim's Beard-moss	*Hennediella heimii*	Secure		
Velenovsky's Hilpertia Moss	*Hilpertia velenovsky*	May Be At Risk	L	G1 - 1999
Hook-beak Tufa-moss	*Hymenostylium recurvirostrum*	Secure		
Sendtner Molendoa Moss	*Molendoa sendtneriana*	Undetermined	L	
Spiral Chalk-moss	*Pterygoneurum lamellatum*	Undetermined		
Oval Chalk-moss	*Pterygoneurum ovatum*	Undetermined		
Hood-leaved Screw-moss	*Stegonia latifolia*	Sensitive	L	
Dog-nerved Screw-moss	*Syntrichia caninervis*	Undetermined	L	
Norway Screw-moss	*Syntrichia norvegica*	Sensitive	L	
Great Hairy Screw-moss	*Syntrichia ruralis*	Secure		
Alpine Crisp-moss	*Tortella alpicola* [d]	Undetermined		G2G4 - 2000
Brittle Crisp-moss	*Tortella fragilis*	Secure		
Brent Crisp-moss	*Tortella inclinata*	Undetermined	L	
Frizzled Crisp-moss	*Tortella tortuosa*	Secure		
Ample Crisp-moss	*Tortula amplexa*	Undetermined	L	
Flamingo-moss	*Tortula cernua*	Secure		
Hoppeana Crisp-moss	*Tortula hoppeana*	Secure		
Laurer's Crisp-moss	*Tortula laureri*	Undetermined	L	
White-beard Crisp-moss	*Tortula leucostoma*	Secure		
Mucroni Crisp-moss	*Tortula mucronifolia*	Secure		
Blunt-leaved Crisp-moss	*Tortula obtusifolia*	Undetermined	L	
Systyle Crisp-moss	*Tortula systylia*	Sensitive	L	
Arctic Crisp-moss	*Trichostomum arcticum*	Sensitive	L	
Dry Crisp-moss	*Trichostomum crispulum*	Undetermined	L	
Narrow Crisp-moss	*Trichostomum tenuirostre*	Undetermined	L	
Green-tufted Stubble-moss	*Weissia controversa*	Secure		
Sphagnales – Sphagnaceae		**Sphagnum-like Bryophytes – Sphagnum Mosses**		
Large Sphagnum Moss	*Sphagnum angustifolium*	Secure		
Annulated Sphagnum Moss	*Sphagnum annulatum*	Undetermined		
Aongstroem's Sphagnum Moss	*Sphagnum aongstroemii*	Secure		
Baltic Sphagnum Moss	*Sphagnum balticum*	Secure		
Acute-leaved Sphagnum Moss	*Sphagnum capillifolium*	Secure		
Central Sphagnum Moss	*Sphagnum centrale*	Undetermined	L	
Compact Sphagnum Moss	*Sphagnum compactum*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Twisted Sphagnum Moss	*Sphagnum contortum*	Undetermined	L	
Fathery Sphagnum Moss	*Sphagnum cuspidatum*	Undetermined		
Fat-topped Sphagnum Moss	*Sphagnum fallax*	Undetermined	L	
Fringed Sphagnum Moss	*Sphagnum fimbriatum*	Secure		
Rusty Sphagnum Moss	*Sphagnum fuscum*	Secure		
Girgensohn's Sphagnum Moss	*Sphagnum girgensohnii*	Secure		
Jensen's Sphagnum Moss	*Sphagnum jensenii*	Undetermined	L	
Lenense Sphagnum Moss	*Sphagnum lenense*	Secure		
Lindberg's Sphagnum Moss	*Sphagnum lindbergii*	Secure		
Magellan Sphagnum Moss	*Sphagnum magellanicum*	Secure		
Magic Sphagnum Moss	*Sphagnum majus*	Undetermined	L	
Mendocino Sphagnum Moss	*Sphagnum mendocinum*	Undetermined	L	
Blunt Sphagnum Moss	*Sphagnum obtusum*	Undetermined	L	
Eastern Sphagnum Moss	*Sphagnum orientale*	Undetermined	L	
Perced-leaved Sphagnum Moss	*Sphagnum perfoliatum*	Undetermined		
Flat-leaved Sphagnum Moss	*Sphagnum platyphyllum*	Undetermined	L	
Handsome Sphagnum Moss	*Sphagnum pulchrum*	Undetermined	L	
Curved Sphagnum Moss	*Sphagnum recurvum*	Secure		
Riparian Sphagnum Moss	*Sphagnum riparium*	Secure		
Little-red Sphagnum Moss	*Sphagnum rubellum*	Secure		
Russow's Sphagnum Moss	*Sphagnum russowii*	Secure		
Spiky Sphagnum Moss	*Sphagnum squarrosum*	Secure		
Steer's Sphagnum Moss	*Sphagnum steerei*	Undetermined		
Lustrous Sphagnum Moss	*Sphagnum subnitens*	Undetermined	L	
Slender Sphagnum Moss	*Sphagnum subsecundum*	Secure		
Rigid Sphagnum Moss	*Sphagnum teres*	Secure		
Warnstorf's Sphagnum Moss	*Sphagnum warnstorfii*	Secure		
Wilf's Sphagnum Moss	*Sphagnum wilfii*	Undetermined		
Wulfian Sphagnum Moss	*Sphagnum wulfianum*	Sensitive	L	

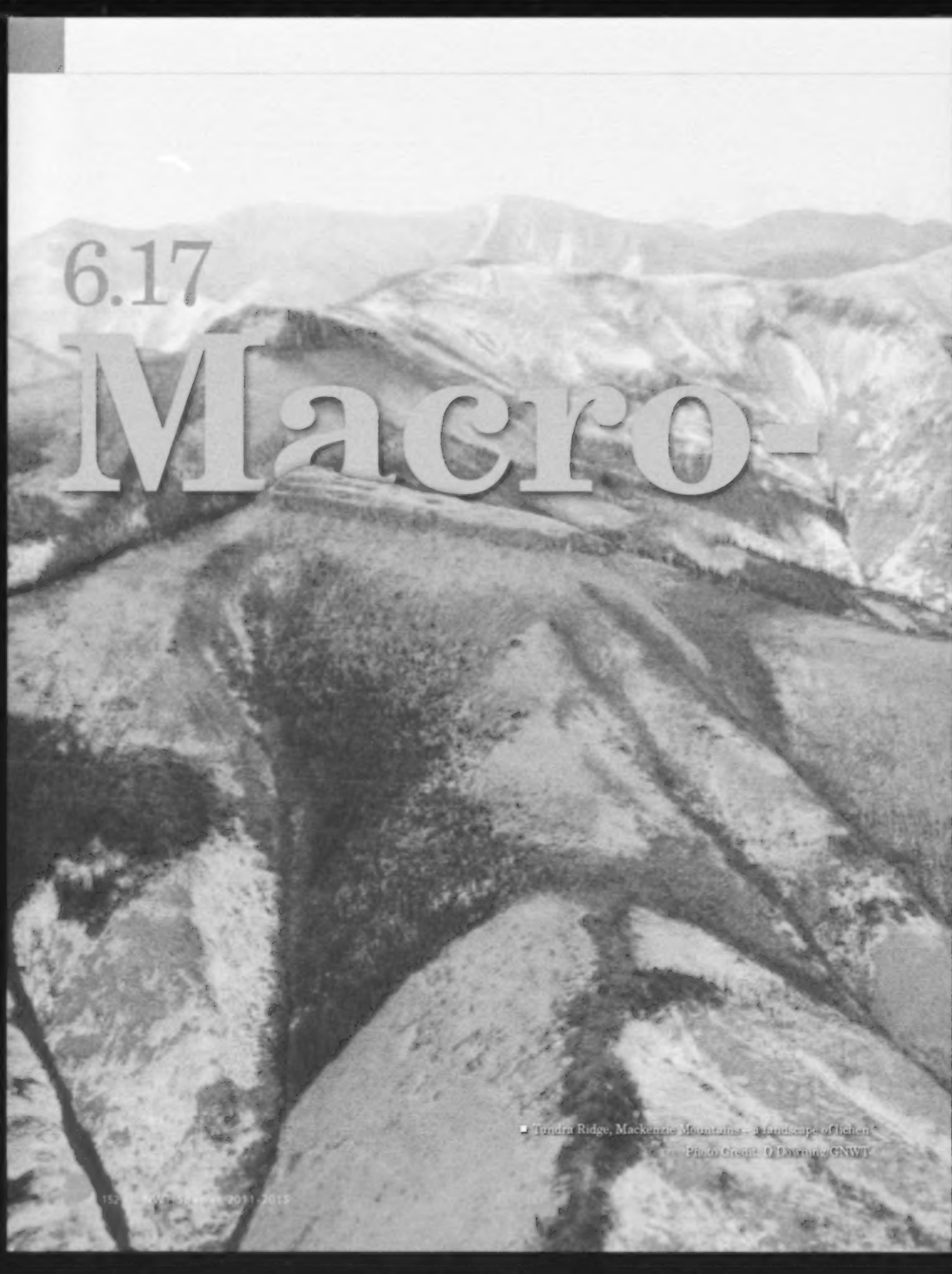
a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT. There is not enough information readily available to determine if the distribution of many moss species is limited in the NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

c *Hilpertia velenovskyi* is synonymous with *Tortula scoteri*, a species of global conservation concern.

d *Torella alpicola* is synonymous with *Tortella tortelloides*, a species of global conservation concern.

6.17 Macro-



■ Tundra Ridge, Mackenzie Mountains – a landscape of lichen.
Photo Credit: © Dominic GNWT

lichens

Lichens are dual organisms, part fungus and part algae: as much ecosystems as organisms. As such, lichens present profound challenges to classification. Few people would claim to "understand" lichens the way they understand, for example, birds or plants. Many popular books have been published on lichens in recent years.

For people who live in the North to learn about lichens is to understand a significant component of their biodiversity. Some lichen (*Cladonia* spp.) also called "White Moss", are boiled to make tea and used in soups.

To date, roughly a thousand lichen species have been documented from boreal and arctic North America. The list of macrolichens presented below is only a fraction of these. There are hundreds of microlichens not listed here.

Lichen collections for museums started in the early 20th century. Most lichen collections from this period are now on deposit at the Canadian Museum of Nature in Ottawa.

With commercial air transport in the 1940s, lichen collecting intensified. Certainly the most prolific collector during this period was wildlife biologist George Scotter, whose studies of caribou took him to many parts of the NWT and Nunavut. From 1950-1990, at least four professional lichenologists visited the NWT. Most of their collections are in American Museums.

Beginning around 1990, lichen floristic research in Canada's North entered a quiescent period – from which it has still not emerged. A survey of the lichen literature about the NWT and Nunavut from 1990 through 2009 yields only 20 publications – ten of which are on the use of lichens as indicators of heavy metal contamination. By contrast, 114 papers have appeared on the lichens of Alaska during the same period.

It is clear that much additional field work is required to provide general status ranks for a majority of the macrolichens in the NWT. Also, a great number of NWT lichens on deposit in Canada's major museums need to be re-examined to determine the species.

In light of the above observations, we offer five recommendations for future research on rare and infrequent macrolichens in NWT:

- Update the official list of NWT lichens regularly
- Examine all NWT specimens in the major museums
- Do field work to look for more sites and verify if some lichens are really rare
- Involve people – publish a popular field book on NWT lichens.

Trevor Goward and Curtis Björk
Enlichened Consulting Ltd.

List 17. Macro-lichens

There are 325 species of macro-lichens confirmed present in the NWT. An additional 21 species are expected to be present. One species is of global conservation concern. Species are listed alphabetically according to the scientific *Order* they belong to, then by *Family*, then by scientific species name. Taxonomy follows Tehler and Wedin (2008).

■ Limestone Sunshine Lichen Photo Credit: D Downing/GNWT

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Acarosporales – Acarosporaceae			Rockscab-like Fungi – Rockscab Lichens	
Maroon-eyed Rockscab Lichen	*Glypholecia scabra*	May Be At Risk		
Acarosporales – Candelariaceae			Rockscab-like Fungi – Candleflame Lichens	
Elfin Candleflame Lichen	*Candelaria concolor*	Undetermined		
Agaricales – Tricholomataceae			Agaric-like Fungi – Mushroom Lichens	
Hudson Mushroom Lichen	*Lichenomphalia hudsoniana*	Sensitive		
Greenpea Mushroom Lichen	*Lichenomphalia umbellifera*	Secure		
Lecanorales – Cladoniaceae			Lichen-like Fungi – Pixie Lichens	
Scantily Clad Pixie Lichen	*Cladonia acuminata*	Undetermined		
Alaska Pixie Lichen	*Cladonia alaskana*	Sensitive		G3G4 - 1999
Quill Pixie Lichen	*Cladonia amaurocraea*	Secure		
Combed Reindeer Lichen	*Cladonia arbuscula*	Secure		
Yellowhorn Pixie Lichen	*Cladonia bacilliformis*	Undetermined		
Toy Soldiers Lichen	*Cladonia bellidiflora*	Undetermined		
Boreal Pixie-cup Lichen	*Cladonia borealis*	Secure		
Stump Soldiers Lichen	*Cladonia botrytes*	Secure		
Lesser Ribbed Pixie Lichen	*Cladonia cariosa*	Secure		
Crowned Pixie-cup Lichen	*Cladonia carneola*	Undetermined		
Singing Pixie Lichen	*Cladonia cenotea*	Secure		
Browned Pixie-cup Lichen	*Cladonia cervicornis*	Undetermined		
Granulating Pixie-cup Lichen	*Cladonia chlorophaea*	Secure		
Madame Pixie Lichen	*Cladonia coccifera*	Undetermined		
Mama Littlehorn Pixie Lichen	*Cladonia coniocraea*	Secure		
Bighorn Pixie Lichen	*Cladonia cornuta*	Secure		
Organ-pipe lichen	*Cladonia crispata*	Secure		
British Soldiers Lichen	*Cladonia cristatella*	Sensitive	L	
Ambiguous Pixie-cup Lichen	*Cladonia cryptochlorophaea*	Undetermined	L	

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Blue-footed Pixie Lichen	*Cladonia cyanipes*	Secure		
Strip-tease Pixie Lichen	*Cladonia decorticata*	Secure		
Lesser Sulphur-cup Lichen	*Cladonia deformis*	Secure		
Finger Pixie-cup Lichen	*Cladonia digitata*	Sensitive		
Orange-footed Pixie Lichen	*Cladonia ecmocyna*	Undetermined		
Trumpeting Pixie Lichen	*Cladonia fimbriata*	Secure		
Smooth Pixie Lichen	*Cladonia gracilis*	Undetermined		
Gray's Pixie-cup Lichen	*Cladonia grayi*	Sensitive	L	
Humble Pixie-cup Lichen	*Cladonia humilis*	Undetermined		
Kanewski's Cladonia	*Cladonia kanewskii*	Presence Expected		
Lipstick Pixie Lichen	*Cladonia macilenta*	Undetermined		
Bullet-proof Pixie Lichen	*Cladonia macroceras*	Undetermined		
Fig-Leaf Pixie Lichen	*Cladonia macrophylla*	Secure		
Large-leaved Pixie Lichen	*Cladonia macrophyllodes*	Secure		
Towering Pixie Lichen	*Cladonia maxima*	Undetermined		
Gritty Pixie-cup Lichen	*Cladonia merochlorophaea*	Undetermined		
Reptilian Pixie-cup Lichen	*Cladonia metacorallifera*	Secure		
Ectomorphic Reindeer Lichen	*Cladonia mitis*	Secure		
Shape-shifting Pixie Lichen	*Cladonia multiformis*	Secure		
Lapland Cladonia	*Cladonia nipponica*	Presence Expected		
Greater Pied Pixie Lichen	*Cladonia phyllophora*	Secure		
Moderate Sulphur-cup Lichen	*Cladonia pleurota*	Secure		
Rosetted Pixie-cup Lichen	*Cladonia pocillum*	Secure		
Pebbled Pixie-cup Lichen	*Cladonia pyxidata*	Secure		
Gray Reindeer Lichen	*Cladonia rangiferina*	Secure		
Wand Lichen	*Cladonia rei*	Undetermined		
Winged Pixie Lichen	*Cladonia scabriuscula*	Sensitive		
Dragon Pixie Lichen	*Cladonia squamosa*	Secure		
Star Reindeer Lichen	*Cladonia stellaris*	Secure		
Lesser Pied Pixie Lichen	*Cladonia stricta*	Undetermined		
Black-footed Reindeer Lichen	*Cladonia stygia*	Secure		
Subcariosa-cup Lichen	*Cladonia subcariosa*	Undetermined		
Rosegarden Pixie Lichen	*Cladonia subfurcata*	Secure		
Antlered Pixie Lichen	*Cladonia subulata*	Secure		
Greater Sulphur-cup Lichen	*Cladonia sulphurina*	Secure		
Greater Ribbed Pixie Lichen	*Cladonia symphycarpia*	Secure		
Blue Pork Pixie Lichen	*Cladonia thomsonii*	Sensitive		
Arctic Pied Pixie Lichen	*Cladonia trassii*	Undetermined		
Crazy-scale Pixie Lichen	*Cladonia turgida*	Sensitive	L	
Thorn Pixie Lichen	*Cladonia uncialis*	Secure		

6.17 Macro-lichens

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Wainio's Reindeer Pixie Lichen	*Cladonia wainioi*	Undetermined	L	
Robust Matchstick Lichen	*Pilophorus robustus*	May Be At Risk	L	
Lecanorales – Coccocarpiaceae				Lichen-like Fungi – Hairball Lichens
Rock Hairball Lichen	*Spilonema revertens*	Sensitive		
Lecanorales – Collemataceae				Lichen-like Fungi – Tarpaper Lichens
Caesar's Tarpaper Lichen	*Collema bachmanianum*	Sensitive		
Pincushion Tarpaper Lichen	*Collema ceraniscum*	Sensitive		
Ten-Cent Tarpaper Lichen	*Collema crispum*	Sensitive	L	
Flaking Tarpaper Lichen	*Collema flaccidum*	Presence Expected		
Effervescent Tarpaper Lichen	*Collema furfuraceum*	Sensitive		
Cellulitic Tarpaper Lichen	*Collema fuscovirens*	Sensitive		
Waterside Tarpaper Lichen	*Collema glebulentum*	May Be At Risk		
Lime-loving Tarpaper Lichen	*Collema limosum*	Sensitive	L	
Protracted Tarpaper Lichen	*Collema multipartitum*	Sensitive	L	
Double-bubble Tarpaper Lichen	*Collema nigrescens*	Undetermined		
Gilled Tarpaper Lichen	*Collema polycarpon*	Sensitive		
Petalled Tarpaper Lichen	*Collema subparvum*	May Be At Risk		
Soil Tarpaper Lichen	*Collema tenax*	Undetermined		
Jelly Flakes Lichen	*Collema undulatum*	Sensitive		
Moontit Vinyl Lichen	*Leptogium burnetiae*	Sensitive		
Rose-petaled Vinyl Lichen	*Leptogium gelatinosum*	Sensitive		
Tattered Vinyl Lichen	*Leptogium lichenoides*	Secure		
Concentric Vinyl Lichen	*Leptogium pseudofurfuraceum*	Undetermined		
Midnight Vinyl Lichen	*Leptogium saturninum*	Secure		
Appressed Vinyl Lichen	*Leptogium subtile*	Undetermined		
Birdnest Vinyl Lichen	*Leptogium tenuissimum*	Sensitive		
Lecanorales – Gypsoplacaceae				Lichen-like Fungi – Earthscale Lichens
Gypsum Earthscale Lichen	*Gypsoplaca macrophylla*	May Be At Risk		
Lecanorales – Lecanoraceae				Lichen-like Fungi – Rockbright Lichens
Pink-eyed Rockbright Lichen	*Rhizoplaca chrysoleuca*	Undetermined		
Green-eyed Rockbright Lichen	*Rhizoplaca melanophthalma*	Sensitive		
Lecanorales – Lobariaceae				Lichen-like Fungi – Lung Lichens
Gray Lungwort Lichen	*Lobaria hallii*	Presence Expected		
Kurokawae Lungwort Lichen	*Lobaria kurokawae*	Presence Expected		
Cabbage Lung Lichen	*Lobaria linita*	Sensitive	L	
Beringian Lungwort lichen	*Lobaria pseudopulmonaria*	Undetermined	L	
Smoker's Lung Lichen	*Lobaria retigera*	May Be At Risk		
Textured Lungwort lichen	*Lobaria scrobiculata*	Undetermined		
Arctic Moon Lichen	*Sticta arctica*	May Be At Risk		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Lecanorales – Massalongiaceae				**Lichen-like Fungi – Liver Lichens**
Moss Liver Lichen	*Massalongia carnosa*	Secure		
Eyed Mossthorns Lichen	*Polychidium muscicola*	Sensitive		
Lecanorales – Nephromataceae				**Lichen-like Fungi – Kidney Lichens**
Arctic Greenlight Lichen	*Nephroma arcticum*	Secure		
Cat Paw Lichen	*Nephroma bellum*	Sensitive		
Purple Paw Lichen	*Nephroma expallidum*	Secure		
Fringed Kidney Lichen	*Nephroma helveticum*	Sensitive		
Peppered Kidney Lichen	*Nephroma isidiosum*	Presence Expected		
Powdery Kidney Lichen	*Nephroma parile*	Secure		
Lecanorales – Pannariaceae				**Lichen-like Fungi – Shingle Lichens**
Moss Shingle Lichen	*Fuscopannaria praetermissa*	Secure		
Mealy-rimmed Shingle Lichen	*Pannaria conoplea*	Sensitive		
Coral Shingle Lichen	*Parmeliella corallinoides*	Undetermined		
Black-bordered Shingle Lichen	*Parmeliella triptophylla*	Undetermined		
Brown-gray Moss-shingle Lichen	*Protopannaria pezizoides*	Secure		
Moss Tarts Lichen	*Psoroma hypnorum*	Secure		
Lecanorales – Parmeliaceae				**Lichen-like Fungi – Crottle Lichens**
Mountain Candlewax Lichen	*Ahtiana sphaerosporella*	Sensitive		
Green Witch's Hair Lichen	*Alectoria ochroleuca*	Secure		
Familiar Witch's Hair Lichen	*Alectoria sarmentosa*	Presence Expected		
Lesser Rock Grub Lichen	*Allantoparmelia almquistii*	Sensitive		
Greater Rock Grub Lichen	*Allantoparmelia alpicola*	Secure		
Siberian Rock Grub Lichen	*Allantoparmelia sibirica*	Presence Expected		
V-fingers Lichen	*Allocetraria madreporiformis*	Secure		
Thin-man's Icelandmoss Lichen	*Arctocetraria andrejevii*	Secure		
Tentacled Icelandmoss Lichen	*Arctocetraria nigricascens*	Undetermined		
Ripple Ring Lichen	*Arctoparmelia centrifuga*	Secure		
Finger Ring Lichen	*Arctoparmelia incurva*	Secure		
Arctic Ring Lichen	*Arctoparmelia separata*	Secure		
Abrading Ring Lichen	*Arctoparmelia subcentrifuga*	Sensitive		
Golden Hankie Lichen	*Asahinea chrysantha*	Secure		
Silver Hankie Lichen	*Asahinea scholanderi*	Secure		
Mountain Diamondback Lichen	*Brodoa oroarctica*	Secure		
Arctic Pretzel Lichen	*Bryocaulon divergens*	Secure		
Gray Horsehair Lichen	*Bryoria capillaris*	Secure		
Resplendent Horsehair Lichen	*Bryoria chalybeiformis*	Undetermined		
Burrhed Horsehair Lichen	*Bryoria furcellata*	Secure		
Pale-footed Horsehair Lichen	*Bryoria fuscescens*	Secure		
Wire Horsehair Lichen	*Bryoria glabra*	Secure		

6.17 Macro-lichens

Common Name	Scientific Species Name	Status Rank	Range Note*	Global Conservation Concern*
Boreal Horsehair Lichen	*Bryoria implexa*	Secure		
Wooly Horsehair Lichen	*Bryoria lanestris*	Secure		
Blonde Horsehair Lichen	*Bryoria nadvornikiana*	Secure		
Tundra Horsehair Lichen	*Bryoria nitidula*	Secure		
Mountain Horsehair Lichen	*Bryoria pseudofuscescens*	Secure		
Spangled Horsehair Lichen	*Bryoria simplicior*	Secure		
Pied Horsehair Lichen	*Bryoria tenuis*	Presence Expected		
Elegant Horsehair Lichen	*Bryoria trichodes*	Secure		
Spiny Heath Lichen	*Cetraria aculeata*	Secure		
Heath Icelandmoss Lichen	*Cetraria ericetorum*	Secure		
True Icelandic Lichen	*Cetraria islandica*	Secure		
Kamchatka Icelandmoss Lichen	*Cetraria kamczatica*	Sensitive	L	
Striped Icelandic Lichen	*Cetraria laevigata*	Secure		
Dubious Heath Lichen	*Cetraria muricata*	Undetermined		
Ciliated Icelandmoss Lichen	*Cetraria nigricans*	Secure		
Small-toothed Icelandmoss Lichen	*Cetraria odontella*	Sensitive		
Snow-bed Icelandmoss Lichen	*Cetrariella delisei*	Secure		
Greater Ruffled Icelandmoss Lichen	*Cetrariella fastigata*	Undetermined		
Arctic Butterfingers Lichen	*Dactylina arctica*	Secure		
Pacific Butterfingers Lichen	*Dactylina beringica*	Secure		
Frost Fingers Lichen	*Dactylina ramulosa*	Secure		
Mountain Oakmoss Lichen	*Evernia divaricata*	Undetermined		
Boreal Oakmoss Lichen	*Evernia mesomorpha*	Secure		
Arctic Oakmoss Lichen	*Evernia perfragilis*	Secure		
Curled Snow Lichen	*Flavocetraria cucullata*	Secure		
Crinkled Snow lichen	*Flavocetraria nivalis*	Secure		
Black Witch's Beard Lichen	*Gowardia arctica*	Sensitive		
Gray Witch's Beard Lichen	*Gowardia nigricans*	Secure		
Varnished Tube Lichen	*Hypogymnia austerodes*	Secure		
Powdered Tube Lichen	*Hypogymnia bitteri*	Secure		
Deflated Tube Lichen	*Hypogymnia metaphysodes*	Undetermined		
Monks-hood Lichen,	*Hypogymnia physodes*	Secure		
Viviparous Tube Lichen	*Hypogymnia subobscura*	Secure		
Umber Monk's Hood Lichen	*Hypogymnia vittata*	Sensitive		
Salted Starburst Lichen	*Imshaugia aleurites*	Secure		
Arctic Tumbleweed Lichen	*Masonhalea richardsonii*	Secure		
Intermingled Camouflage Lichen	*Melanelia commixta*	Secure		
Mealy Camouflage Lichen	*Melanelia disjuncta*	Secure		
Rimmed Camouflage Lichen	*Melanelia hepatizon*	Secure		
Shingled Camouflage Lichen	*Melanelia panniformis*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Powedered Camouflage Lichen	*Melanelia sorediata*	Secure		
Alpine Camouflage Lichen	*Melanelia stygia*	Secure		
Dimpled Camouflage Lichen	*Melanelia tominii*	Secure		
Polished Camouflage Lichen	*Melanelixia fuliginosa*	Sensitive		
Abraded Camouflage Lichen	*Melanelixia subaurifera*	Secure		
Elegant Camouflage Lichen	*Melanohalea elegantula*	Secure		
Lustrous Camouflage Lichen	*Melanohalea exasperatula*	Secure		
Townhall Camouflage Lichen	*Melanohalea infumata*	Secure		
Spotted Camouflage Lichen	*Melanohalea olivacea*	Secure		
Olive Camouflage Lichen	*Melanohalea olivaceoides*	Presence Expected		
Northern Camouflage Lichen	*Melanohalea septentrionalis*	Secure		
Fraudans Shield Lichen	*Parmelia fraudans*	Secure		
Smoky Crottle Lichen	*Parmelia omphalodes*	Secure		
Salted Crottle Lichen	*Parmelia saxatilis*	Secure		
Silver-rimmed Crottle Lichen	*Parmelia skultii*	Sensitive		
Hammered Shield lichen	*Parmelia sulcata*	Secure		
Green Starburst Lichen	*Parmeliopsis ambigua*	Secure		
Gray Starburst Lichen	*Parmeliopsis hyperopta*	Secure		
Varied Rag Lichen	*Platismatia glauca*	Sensitive		
Coarse Rockwool Lichen	*Pseudephebe minuscula*	Secure		
Fine Rockwool Lichen	*Pseudephebe pubescens*	Secure		
Fringed Wrinkle Lichen	*Tuckermannopsis americana*	Secure		
Powdered Wrinkle Lichen	*Tuckermannopsis chlorophylla*	Sensitive	L	
Thornless Wrinkle Lichen	*Tuckermannopsis inermis*	Undetermined		
Broad Wrinkle Lichen	*Tuckermannopsis platyphylla*	Undetermined	L	
Chestnut Wrinkle Lichen	*Tuckermannopsis sepincola*	Secure		
Pitted Beard Lichen	*Usnea cavernosa*	Undetermined		
Fishbone Beard Lichen	*Usnea filipendula*	Undetermined	L	
Lustrous Beard Lichen	*Usnea glabrata*	Undetermined		
Spotted Beard Lichen	*Usnea glabrescens*	Undetermined		
Bristly Beard Lichen	*Usnea hirta*	Undetermined		
Powder-ringed Beard Lichen	*Usnea lapponica*	Undetermined		
Straw Beard Lichen	*Usnea scabrata*	Secure		
Zebra Beard Lichen	*Usnea sphacelata*	May Be At Risk		
Nit Beard Lichen	*Usnea subfloridana*	Undetermined		
Embossed Beard Lichen	*Usnea substerilis*	Undetermined		
Powdered Sunshine Lichen	*Vulpicida pinastri*	Secure		
Limestone Sunshine Lichen	*Vulpicida tilesii*	Secure		
Greater Leaping Rockfrog Lichen	*Xanthoparmelia chlorochroa*	Sensitive	L	
Colorado Rockfrog Lichen	*Xanthoparmelia coloradoënsis*	Undetermined		

6.17 Macro-lichens

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Palomino Rockfrog Lichen	*Xanthoparmelia stenophylla*	Undetermined		
Barely Hopping Rockfrog Lichen	*Xanthoparmelia wyomingica*	May Be At Risk		
Lecanorales – Peltigeraceae				**Lichen-like Fungi – Pelt Lichens**
Silver-edged Freckle Pelt Lichen	*Peltigera aphthosa*	Secure		
Felt Pelt Lichen	*Peltigera canina*	Secure		
Chestnut Pelt Lichen	*Peltigera castanea*	Undetermined		
Temporary Pelt Lichen	*Peltigera didactyla*	Sensitive		
Concentric Pelt Lichen	*Peltigera elisabethae*	Undetermined		
Peppered Pelt Lichen	*Peltigera evansiana*	Presence Expected		
Mothwing Pelt Lichen	*Peltigera lepidophora*	Secure		
Ruffled Freckle Pelt Lichen	*Peltigera leucophlebia*	Secure		
Apple Pelt Lichen	*Peltigera malacea*	Secure		
Diamond Pelt Lichen	*Peltigera membranacea*	Sensitive		
Black-saddle Pelt Lichen	*Peltigera neckeri*	Sensitive		
Undulating Pelt Lichen	*Peltigera neopolydactyla*	Undetermined		
Bog Pelt Lichen	*Peltigera occidentalis*	Undetermined		
Pioneer Pelt Lichen	*Peltigera polydactylon*	Undetermined		
Pale-bellied Pelt Lichen	*Peltigera ponojensis*	Undetermined		
Born-again Pelt Lichen	*Peltigera praetextata*	Presence Expected		
Sponge Pelt Lichen	*Peltigera retifoveata*	Sensitive		
Black-bellied Pelt Lichen	*Peltigera rufescens*	Secure		
Greater Toad Pelt Lichen	*Peltigera scabrosa*	Secure		
Fan Pelt Lichen	*Peltigera venosa*	Secure		
Lesser Tundra Owl Lichen	*Solorina bispora*	Secure		
Orange Chocolate Chip Lichen	*Solorina crocea*	Secure		
Woodland Owl Lichen	*Solorina saccata*	Secure		
Blinking Owl Lichen	*Solorina spongiosa*	Sensitive		
Lecanorales – Physciaceae				**Lichen-like Fungi – Rosette Lichens**
Hairy Fringe Lichen	*Anaptychia crinalis*	Secure		
Powdered Fringe Lichen	*Heterodermia speciosa*	May Be At Risk		
Upstanding Shadow Lichen	*Phaeophyscia constipata*	Sensitive		
Smiling Shadow Lichen	*Phaeophyscia endococcinea*	Undetermined		
Dark Shadow Lichen	*Phaeophyscia sciastra*	Secure		
Hooded Rosette Lichen	*Physcia adscendens*	Secure		
Hoary Rosette Lichen	*Physcia aipolia*	Secure		
Outward-looking Rosette Lichen	*Physcia atrophila*	Undetermined		
Blue-gray Rosette Lichen	*Physcia caesia*	Secure		
Powder-tipped Rosette Lichen	*Physcia dubia*	Secure		
Black-eyed Rosette Lichen	*Physcia phaea*	Sensitive		
Immaculate Rosette Lichen	*Physcia stellaris*	Undetermined		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Beaded Rosette Lichen	*Physcia tribacia*	Sensitive		
Petaled Frost Lichen	*Physconia americana*	Undetermined		
Bottlebrush Frost Lichen	*Physconia detersa*	Undetermined		
Ground Frost Lichen	*Physconia muscigena*	Secure		
Crescent Forst Lichen	*Physconia perisidiosa*	Secure		
Arboreal Bottle-collection Lichen	*Tholurna dissimilis*	May Be At Risk	L	
Lecanorales – Placynthiaceae			**Lichen-like Fungi – Ink Lichens**	
Lilliput Ink Lichen	*Placynthium asperellum*	Sensitive		
Common Ink Lichen	*Placynthium nigrum*	Undetermined		
Peppered Brownette Lichen	*Vestergrenopsis isidiata*	May Be At Risk	L	
Lecanorales – Psoraceae			**Lichen-like Fungi – Scale Lichens**	
Blushing Scale Lichen	*Psora decipiens*	Secure		
Mountain Scale Lichen	*Psora himalayana*	Secure		
High Arctic Scale Lichen	*Psora tenuifolia*	Undetermined		
Blue-edged Scale Lichen	*Psorula rufonigra*	Presence Expected		
Lecanorales – Ramalinaceae			**Lichen-like Fungi – Ribbon Lichens**	
Arctic Ribbon Lichen	*Ramalina almquistii*	Undetermined		
Punctured Ribbon Lichen	*Ramalina dilacerata*	Sensitive		
Rock Ribbon Lichen	*Ramalina intermedia*	Sensitive	L	
Hooded Ribbon Lichen	*Ramalina obtusata*	Undetermined		
Chalky Ribbon Lichen	*Ramalina pollinaria*	Undetermined		
Frayed Ribbon Lichen	*Ramalina roesleri*	Undetermined		
Broom Ribbon Lichen	*Ramalina scoparia*	Presence Expected		
Fan Ribbon Lichen	*Ramalina sinensis*	Sensitive		
Angel's Hair	*Ramalina thrausta*	Presence Expected		
Lecanorales – Sphaerophoraceae			**Lichen-like Fungi – Coral Lichens**	
Cushion Coral Lichen	*Sphaerophorus fragilis*	Sensitive		
Northern Coral Lichen	*Sphaerophorus globosus*	Secure		
Lecanorales – Stereocaulaceae			**Lichen-like Fungi – Foam Lichens**	
Alpine Foam Lichen	*Stereocaulon alpinum*	Secure		
Sandy Foam Lichen	*Stereocaulon arenarium*	May Be At Risk		
Cauliflower Foam Lichen	*Stereocaulon botryosum*	Sensitive		
Granular Soil Foam Lichen	*Stereocaulon condensatum*	Sensitive		
Finger-scale Foam Lichen	*Stereocaulon dactylophyllum*	Undetermined		
Alpine Soil Foam Lichen	*Stereocaulon glareosum*	Secure		
Grand Foam Lichen	*Stereocaulon grande*	Secure		
Greenland Foam Lichen	*Stereocaulon groenlandicum*	Presence Expected		
Encrusted Coral Lichen	*Stereocaulon incrustatum*	Undetermined		
Pacific Brain Foam Lichen	*Stereocaulon intermedium*	Presence Expected		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
High Arctic Foam Lichen	*Stereocaulon leprocephalum*	Undetermined		
Cottontail Foam Lichen	*Stereocaulon paschale*	Secure		
Snow Foam Lichen	*Stereocaulon rivulorum*	Secure		
Woolly Foam Lichen	*Stereocaulon saviikii*	Presence Expected		
Rock Foam lichen	*Stereocaulon saxatile*	Undetermined		
Two-toned Foam Lichen	*Stereocaulon symphycheilum*	Undetermined		
Eyed Foam Lichen	*Stereocaulon tomentosum*	Secure		
Variegated Foam Lichen	*Stereocaulon vesuvianum*	Sensitive		
Lecanorales – Teloschistaceae				Lichen-like Fungi – Orange Lichens
Tundra Sulphur Lichen	*Fulgensia bracteata*	Secure		
Desert Sulphur Lichen	*Fulgensia fulgens*	Sensitive		
Orangebush Lichen	*Seirophora aurantiaca*	May Be At Risk		
Crannied Orangebush Lichen	*Seirophora contortuplicatus*	May Be At Risk		
Arctic Sunburst Lichen	*Xanthomendoza borealis*	Sensitive		
Hooded Sunburst Lichen	*Xanthomendoza fallax*	Undetermined		
Powdery Sunburst Lichen	*Xanthomendoza ulophyllodes*	Undetermined	L	
Shrubby Sunburst Lichen	*Xanthoria candelaria*	Secure		
Elegant Sunburst Lichen	*Xanthoria elegans*	Secure		
Pin-cushion Sunburst Lichen	*Xanthoria polycarpa*	Sensitive		
Sugared Sunburst Lichen	*Xanthoria sorediata*	Secure		
Lichinales – Lichinaceae				Rockshag-like Fungi – Rockshag Lichens
Dryside Rockshag Lichen	*Ephebe hispidula*	Undetermined		
Waterside Rockshag Lichen	*Ephebe lanata*	Undetermined		
Frosted Rockserpent Lichen	*Zahlbruckneriella calcarea*	May Be At Risk		
Ostropales – Arctomiaceae				Beret-like Fungi – Arctic Rosette Lichens
Delicate Arctomia Lichen	*Arctomia delicatula*	Sensitive		
Rust-brown Tiny Rosette Lichen	*Arctomia interfixa*	Sensitive		
Ostropales – Baeomycetaceae				Beret-like Fungi – Beret Lichens
Fleshy Beret Lichen	*Baeomyces carneus*	Undetermined		
Carpet Beret Lichen	*Baeomyces placophyllus*	Secure		
Brown Beret Lichen	*Baeomyces rufus*	Secure		
Ostropales – Icmadophilaceae				Beret-like Fungi – Turbans Lichens
Pink Turbans Lichen	*Dibaeis baeomyces*	Sensitive		
Pertusariales – Icmadophilaceae				Wart-like Fungi – Fingers Lichens
Water Fingers Lichen	*Siphula ceratites*	May Be At Risk		
Universal Whiteworm Lichen	*Thamnolia vermicularis*	Secure		
Umbilicariales – Umbilicariaceae				Rocktripe-like Fungi – Rocktripe Lichens
Brown-bellied Toadskin Lichen	*Lasallia papulosa*	Sensitive		
Black-bellied Toadskin Lichen	*Lasallia pensylvanica*	Secure		

Common Name	Scientific Species Name	Status Rank	Range Note[a]	Global Conservation Concern[b]
Frosted Rocktripe Lichen	*Umbilicaria americana*	Undetermined	L	
Starred Rocktripe Lichen	*Umbilicaria angulata*	Undetermined		
Arctic Rocktripe Lichen	*Umbilicaria arctica*	Sensitive		
Origami Rocktripe Lichen	*Umbilicaria carolliniana*	May Be At Risk		
Questionable Rocktripe Lichen	*Umbilicaria cinereorufescens*	Undetermined		
Fringed Rocktripe Lichen	*Umbilicaria cylindrica*	Secure		
Netted Rocktripe Lichen	*Umbilicaria decussata*	Sensitive		
Peppered Rocktripe Lichen	*Umbilicaria deusta*	Secure		
Havaas's Rocktripe Lichen	*Umbilicaria havaasii*	Sensitive		
Granulating Rocktripe Lichen	*Umbilicaria hirsuta*	May Be At Risk		
Blistered Rocktripe Lichen	*Umbilicaria hyperborea*	Secure		
Lesser Salted Rocktripe Lichen	*Umbilicaria krascheninnikovii*	Sensitive		
Puckered Rocktripe Lichen	*Umbilicaria lyngei*	Sensitive		
Monumental Rocktripe Lichen	*Umbilicaria mammulata*	Undetermined		
Plated Rocktripe Lichen	*Umbilicaria mühlenbergii*	Secure		
Emery Rocktripe Lichen	*Umbilicaria phaea*	Sensitive		
Petaled Rocktripe Lichen	*Umbilicaria polyphylla*	Sensitive		
Ballpoint Rocktripe Lichen	*Umbilicaria polyrrhiza*	Undetermined		
Greater Salted Rocktripe Lichen	*Umbilicaria proboscidea*	Secure		
Sandpaper Rocktripe Lichen	*Umbilicaria rigida*	Secure		
Perforated Rocktripe Lichen	*Umbilicaria torrefacta*	Secure		
Grizzled Rocktripe Lichen	*Umbilicaria vellea*	Secure		
Blushing Rocktripe Lichen	*Umbilicaria virginis*	Sensitive		
Verrucariales – Verrucariaceae				Tar-like Fungi – Tar Lichens
Quilted Stippleback Lichen	*Dermatocarpon intestiniforme*	Sensitive		
Brookside Stippleback Lichen	*Dermatocarpon luridum*	Undetermined		
Grounded Stippleback Lichen	*Dermatocarpon miniatum*	Undetermined		
Cold-Water Stippleback Lichen	*Dermatocarpon rivulorum*	Presence Expected		
Soil Stipplescale Lichen	*Endocarpon pusillum*	Presence Expected		

a Range Note: L = Species with limited distribution (less than 5% of NWT), hence small numbers are expected. X = Usual range of species not in NWT. There is not enough information readily available to determine if the distribution of many lichen species is limited in the NWT.

b For your convenience, the status derived from other processes than the one presented in this report is described in this column. COSEWIC Status: Status for a species in Canada if it has already been assessed in a detailed manner by COSEWIC as of 2010. The year of each assessment is given with each status. After 2010, please consult current and additional status assessments on the COSEWIC web page (www.cosewic.gc.ca). Global Conservation Concern: Rank of a species in the world as assessed by NatureServe. GH: Possibly Extinct, G1: Critically Imperilled, G2: Imperilled, G3: Vulnerable. Definitions and more information can be found at www.natureserve.org.

7. Challenges and Opportunities – What are the next steps?

As of 2011, the general status of about 10% of all species expected to be present in the NWT have been ranked.

We continue to rank the general status of more groups of lesser-known species: the insects. All vascular plants, spiders, mosses, macro-lichens and vertebrates are ranked, except the marine fishes.

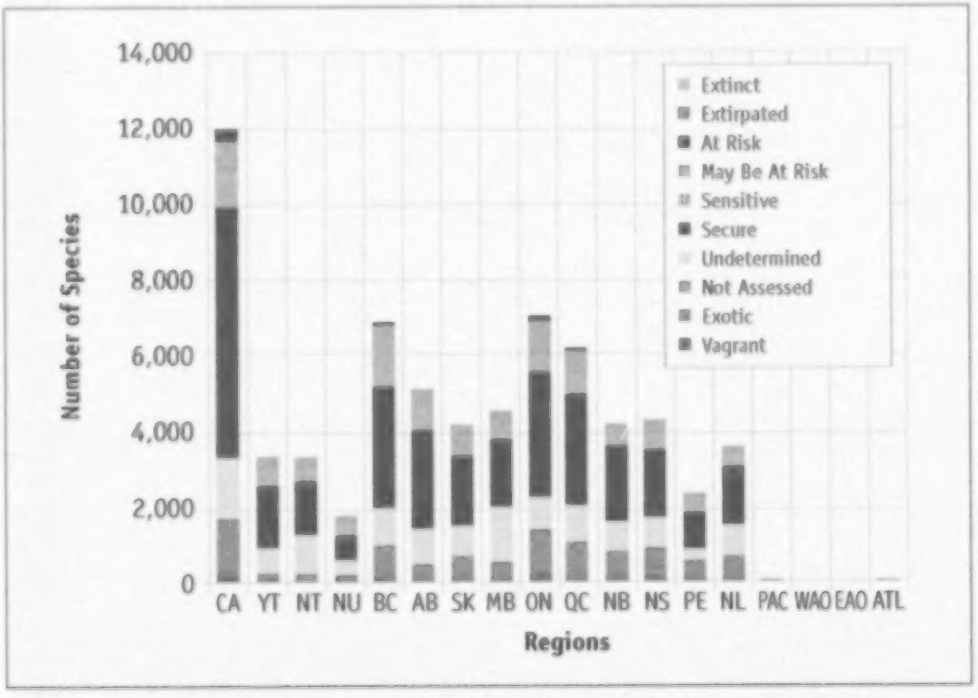
Cooperating

The General Status Ranking Program is done in cooperation with all other jurisdictions in Canada. Each NWT rank is used, along with the ranks from other provinces and territories, to draft Canada-wide ranks for each species. To find these Canada-wide ranks and more information **link to www.wildspecies.ca**.

Coordinating the ranking of the general status for species across Canada can be a daunting task. The National General Status Working Group, of which the NWT is a member, coordinates the work following a schedule of priorities for ranking that is based on the availability of information and expertise across Canada and the world. We are already collecting information and will be working to rank the following groups of species for the next report:

- 2012 – terrestrial and freshwater molluscs, marine fishes
- 2013 – ants, bees and paper wasps, more macro-moths
- 2014 – other insect groups

All the species ranked in the present report will be reviewed and their rank may be modified in 2015 for the *NWT Species 2016-2020* report.



Results of the general status assessments for all species in Canada from the *Wild Species 2010* report. (note: This chart does not include grasshoppers and fishes, which were not included in the 2010 National report, but are included in the present report *NWT Species 2011-2015*). CA, Canada; YT, Yukon; NT: Northwest Territories; NU: Nunavut; BC, British Columbia, AB, Alberta, SK, Saskatchewan, MB, Manitoba; ON, Ontario; QC, Québec; NB, New Brunswick, NS, Nova Scotia; PE, Prince Edwards Island; NL, Newfoundland and Labrador; PAC, Pacific Ocean, WAO, Western Arctic Ocean; EAO, Eastern Arctic Ocean; ATL, Atlantic. (CESCC 2011)

Data and Information Retrieving

We continue to bring back copies of the data and information on NWT specimens stored in institutions in Canada or outside the country (see Carrière et al. 2009). Results from past studies and surveys are essential to compare with our current knowledge to enable us to track changes in northern ecosystems. For example, the NWT Virtual Herbarium, a photographic compilation of plant specimens collected in the NWT and stored in herbaria in Canada and elsewhere, can be used to map and study the distribution of all vascular plants in the NWT. Similar databases for mosses and for other groups of species are being assembled and stored in the Wildlife Management Information System (WMIS). Sharing resources and data with development agencies and industry help complement current monitoring programs and enhance opportunities.

We will continue to enhance our efforts to facilitate the input and sharing of traditional and local knowledge of the land, while respecting the need to preserve that knowledge for future generations. **Future opportunities for both visiting experts and Northerners exist; both can learn by working together and by sharing experiences on the land to gain insights on all NWT species.**

Evaluating

The evaluation system described in this report must remain consistent between years, but improvements should be possible. In 2005, we added a category that is not used by other jurisdictions in Canada: "Presence Expected". This category helps differentiate between species that are not recorded in the NWT but are suspected to be present, and species that are truly new to the NWT. This category was necessary in a jurisdiction where search efforts for some species groups are not extensive and where a valid method for estimating the arrival rates of new species is essential to track the potential effects of a changing climate.

All residents are responsible for conserving and preserving NWT species for future generations. Monitoring the general status of NWT species using simple but efficient criteria is continuing with the help of many agencies and knowledgeable people sharing information every year. This monitoring is helping us detect changes in species distribution, population numbers, and threats.

The NWT is rich in biodiversity. Large numbers of species thrive here, and Northerners have a great depth of knowledge of the land and enthusiasm for all species.

Your Help

Your opinion on the rank of NWT species will be greatly appreciated. **We invite you to share your observations and your knowledge by participating in any of the monitoring programs available in the Northwest Territories.** This information is summarized in the form of species lists and general status ranks, and then shared back with you in the NWT Species Monitoring Infobase available at www.nwtspeciesatrisk.ca.

"While traveling across the Territories, I was amazed by the abundance of great habitats. I felt that I should stop at many places. For people with an interest in insects, the Northwest Territories are a great adventure lasting easily more than a life time, and not least an opportunity to meet very hospitable people and cultures in each region."

– Henri Goulet

■ Collared Pika Photo Credit: J Nagy

Online Resources To Help Identify Biodiversity are Marked by the Symbol

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● Bearded Seal

Photo Credit: C Ekhart

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Participating Agencies

All species ranks were reviewed by the ad hoc Working Group on General Status of NWT Species composed of all agencies with wildlife management responsibilities in the NWT:

Coordination:

- Department of Environment and Natural Resources, Government of the Northwest Territories

In Cooperation with:

- Environment Canada, Government of Canada
- Fisheries and Oceans Canada, Government of Canada,
- Fisheries Joint Management Committee
- Gwich'in Renewable Resources Board
- Sahtu Renewable Resources Board
- Wildlife Management Advisory Council (NWT)
- Wek'èezhìi Renewable Resources Board

Participating Individuals

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Amphibians and Reptiles: Mike Fournier, Danny Allaire, Susan Fleck, Danny Beaulieu. Dr. Danna Schock, Dr. Mike Oldham.
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Damselflies and Dragonflies: Dr. Paul Catling, Doug Tate.
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Fishes: Dr. Jim Reist, Bruce Hanna, Neil Mochnacz, Andrew Majewski, Chatelle Sawatzky, Pete Cott, Jim Johnson, Holly Cleator, Kathleen Martin.
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Mosquitoes: Syd Cannings, Aynsley Thielman, Fiona Hunter, Dr. Brett Elkin.
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10. Monitoring Infosheet

To Participate in a **Monitoring Program** or to Contact a **Regional Biologist**:

- South Slave Region
  (867) 872 6400
- Inuvik Region
  (867) 777 7230
- North Slave Region
  (867) 873 7184
- Sahtu Region
  (867) 587 3500
- Dehcho Region
  (867) 695 7475

To Report **Observations on Wildlife – Mammals:**
WildlifeOBS@gov.nt.ca

To Report a **Forest Fire:**
(877) NWT FIRE

To Report a **Poacher:**
(866) POA CHER

Any Questions About **Birds** or **To Report Bird Observations**:
NWT Bird Checklist Survey
NWTChecklist@ec.gc.ca
(867) 669-4771
www.NWTChecklist.com

To Report a **Fishing Violation:**
(800) 222 TIPS

Any Questions About **Fish or Marine Mammals**:
Department of Fisheries and Oceans
Yellowknife (867) 669 4900
Inuvik (867) 777 7500
Hay River (867) 874 5570

To Report Observations of **Amphibians or Reptiles:**
NWT – Frog Watch
WildlifeOBS@gov.nt.ca
frogwatch@cnf.ca
(867) 920 6327
Pamphlets available at ENR Offices.

To Report **Insect** Observations or to Contact an **Insect** Specialist:
NWTBUGS@gov.nt.ca
NWT keys available at www.enr.gov.nt.ca

To Report a **Banded Bird:**
(800) 327 BAND

To Report **Diseased Wildlife:**
Wildlife Disease Specialist
(867) 873 7761

To Report a **Spill of Oil Chemicals** or other **Hazardous Materials:**
NWT 24-hour Spill Report Line
(867) 920 8130 (Collect calls accepted)

To obtain a copy of the **NWT Species Monitoring Infobase** or to obtain more information about the General Status Ranking Process, contact:
Wildlife Division
Department of Environment and Natural Resources,
Government of the Northwest Territories
Box 1320
Yellowknife, NT
Canada X1A 2L9

Phone: (867) 920-6327

VISIT
The NWT Wildlife Home Page
www.enr.gov.nt.ca

The NWT Species at Risk Home Page
www.nwtspeciesatrisk.ca

■ Snowshoe Hare
Photo Credit: R Kennedy